

SDG COVER PAGE

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51847 MA No.: _____ SDG No.: ME2904

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method			
		ICP-AES	ICP-MS	Mercury	Cyanide
ME2904	P5335-01	X	X	X	X
ME2905	P5335-02	X	X	X	X
ME2906	P5335-03	X	X	X	X
ME2907	P5335-04	X	X	X	X
ME2908	P5335-05	X	X	X	X
ME2909	P5335-06	X	X	X	X
ME2910	P5335-07	X	X	X	X
ME2911	P5335-08	X	X	X	X
ME2912	P5335-09	X	X	X	X
ME2913	P5335-10	X	X	X	X
ME2914	P5335-11	X	X	X	X
ME2915	P5335-12	X	X	X	X
ME2916	P5335-13	X	X	X	X
ME2917	P5335-14	X	X	X	X
ME2918	P5335-15	X	X	X	X
ME2919	P5335-16	X	X	X	X
ME2920	P5335-17	X	X	X	X
ME2921	P5335-18	X	X	X	X
ME2923	P5335-19	X	X	X	X
ME2923D	P5335-20	X	X	X	X
ME2923S	P5335-21	X	X	X	X

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: _____

No: 5-121624-170037-0310

Lab Phone: 908-728-3151

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
IA15AST45-0-0.5	E2911	Soil/	Grab	Semivolatiles, PAHs+PCP by SIM (TAT 21 Days)(21), ARO(21), VOA(21)	2931, 4875, 4877 (MeOH), 4878, 4879 (6)	IA-15-AST-45	12/16/2024 09:35	
IA15AST46-0-0.5	E2912	Soil/	Grab	Semivolatiles, PAHs+PCP by SIM (TAT 21 Days)(21), ARO(21), VOA(21)	2931, 4880, 4882 (MeOH), 4883, 4884 (6)	IA-15-AST-46	12/16/2024 09:50	
IA15AST40-0-0.5	ME2904	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4786 (1)	IA-15-AST-40	12/11/2024 16:20	1
AST-24-106	ME2905	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4801 (1)	AST-24-106	12/11/2024 16:20	2
IA15AST41-0-0.5	ME2906	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4806 (1)	IA-15-AST-41	12/12/2024 09:40	3
IA15AST42-0-0.5	ME2907	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4811 (1)	IA-15-AST-42	12/12/2024 10:00	4
IA15AST43-0-0.5	ME2908	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4816 (1)	IA-15-AST-43	12/12/2024 10:40	5
IA15AST44-0-0.5	ME2909	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4821 (1)	IA-15-AST-44	12/12/2024 11:05	6
IA11MW06s-34-35	ME2910	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4826 (1)	IA-11-MW-06s	12/12/2024 11:40	7
IA15AST45-0-0.5	ME2911	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4876 (1)	IA-15-AST-45	12/16/2024 09:35	8
IA15AST46-0-0.5	ME2912	Soil/	Grab	ICP-MS/AES+HG+CN(21)	4881 (1)	IA-15-AST-46	12/16/2024 09:50	9

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: ARO+PEST=Arroclors + Pesticides, VOA=Volatiles, ARO=Arroclors, ICP-MS/AES+HG+CN=ICP-AES/MS (5-10, 11+)+HG+CN

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
M-2 D-116	[Signature]	18:30 12/16/2024	UPS - [Signature] UPS	18:30 12/16/2024 12-18-24 1020	M-2 the Good temp 2.1° the same temp as previous custodial seals intact

No: 5-121724-082925-0311

Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed

Lab Phone: 908-728-3151

[illegible]

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

Analysis Key: ARO=Aroclors, VOA=Volatiles, ARO+PEST=Aroclors + Pesticides, ICP-MS/AES+HG+CN=ICP-AES/MS (5-10, 11+)+HG+CN

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Comerdyne, Plexus	12/18/14 1730	CRS	1800 12/18/14	good at temp
			DR	10:32 12-19-24	22 Cent 1 2.3 '1
					Custody Seal Attached Temp Blank Pres-

USEPA CLP COC (LAB COPY)

Date Shipped: 12/18/2024

Carrier Name: UPS

Airbill No: 1Z93947Y0107684847

CHAIN OF CUSTODY RECORD

Case #: 51847

Cooler #: 16

No: 5-121724-150913-0313

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 908-728-3151

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
IA15AST16-0-0.5	E2922	Soil	Grab	Semivolatiles, PAHs+PCP by SIM (TAT 21 Days)(21), ARO(21), VOA(21)	2931, 4942, 4944 (MeOH), 4945, 4946 (6)	IA-15-AST-16	12/17/2024 09:45	
IA15AST16-0-0.5-MS/MSD	E2923	Soil	Grab	Semivolatiles, PAHs+PCP by SIM (TAT 21 Days)(21), ARO(21), VOA(21)	2931, 4947, 4949 (MeOH), 4950, 4951 (12)	IA-15-AST-16	12/17/2024 09:45	
IA15AST17-0-0.5	E2924	Soil	Grab	Semivolatiles, PAHs+PCP by SIM (TAT 21 Days)(21), ARO(21), VOA(21)	2931, 4952, 4954 (MeOH), 4955, 4956 (6)	IA-15-AST-17	12/17/2024 10:45	
AST-24-108	E2925	Soil	Grab	Semivolatiles, PAHs+PCP by SIM (TAT 21 Days)(21), ARO(21), VOA(21)	2931, 4957, 4959 (MeOH), 4960, 4961 (6)	AST-24-108	12/17/2024 10:45	
IA15AST18-0-0.5	E2926	Soil	Grab	Semivolatiles, PAHs+PCP by SIM (TAT 21 Days)(21), ARO(21), VOA(21)	2931, 4962, 4964 (MeOH), 4965, 4966 (6)	IA-15-AST-18	12/17/2024 11:45	
IA15AST16-0-0.5	ME2922	Soil	Grab	ICP-MS/AES+HG+CN(21)	4943 (1)	IA-15-AST-16	12/17/2024 09:45	✓
IA15AST16-0-0.5-MS/MSD	ME2923	Soil	Grab	ICP-MS/AES+HG+CN(21)	4948 (2)	IA-15-AST-16	12/17/2024 09:45	✓
IA15AST17-0-0.5	ME2924	Soil	Grab	ICP-MS/AES+HG+CN(21)	4963 (1)	IA-15-AST-17	12/17/2024 10:45	✓
AST-24-108	ME2925	Soil	Grab	ICP-MS/AES+HG+CN(21)	4958 (1)	AST-24-108	12/17/2024 10:45	✓
IA15AST18-0-0.5	ME2926	Soil	Grab	ICP-MS/AES+HG+CN(21)	4963 (1)	IA-15-AST-18	12/17/2024 11:45	✓

Special Instructions: Please return cooler with enclosed airbill (1Z93947Y0330831425).

Analysis Key: ARO=Aroclors, VOA=Volatiles, ICP-MS/AES+HG+CN=ICP-AES/MS (5-10, 11+)+HG+CN

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Con Lab, Plastics	12/18/24 1740	UPS	12/17/24 1800	good, q & tsn
			R. Melendez	12/19/24 1038	pe gun + 1 2.3°
					Temp 18/19/24 present
					Custody seal intact

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page <u>1</u> of <u>3</u>
Received By (Print Name) <u>Gorge Negron</u>		Log-in Date 12/18/2024
Received By (Signature) <u>[Signature]</u>		
Case Number 51847	SDG No. ME2904	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>1z93947y0138100418</u> <u>1</u>
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	<u>2.1</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>12/18/2024</u>
12. Time Received	<u>10:20</u>

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	ME2904	N/A	4796	P5335-01	Intact
2	ME2905	N/A	4801	P5335-02	Intact
3	ME2906	N/A	4806	P5335-03	Intact
4	ME2907	N/A	4811	P5335-04	Intact
5	ME2908	N/A	4816	P5335-05	Intact
6	ME2909	N/A	4821	P5335-06	Intact
7	ME2910	N/A	4826	P5335-07	Intact
8	ME2911	N/A	4876	P5335-08	Intact
9	ME2912	N/A	4881	P5335-09	Intact
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
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>12/19/24</u>	Logbook Page No. N/A

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page <u>2</u> of <u>3</u>
Received By (Print Name) <u>Cassandra Rie</u>		Log-in Date 12/19/2024
Received By (Signature) <u>[Signature]</u>		
Case Number 51847	SDG No. ME2904	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>1z93947y0104219631</u> <u>2</u>
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	<u>2.3</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>12/19/2024</u>
12. Time Received	<u>10:32</u>

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	ME2913	N/A	4886	P5335-10	Intact
2	ME2914	N/A	4891	P5335-11	Intact
3	ME2915	N/A	4896	P5335-12	Intact
4	ME2916	N/A	4901	P5335-13	Intact
5	ME2917	N/A	4906	P5335-14	Intact
6	ME2918	N/A	4911	P5335-15	Intact
7	ME2919	N/A	4916	P5335-16	Intact
8	ME2920	N/A	4921	P5335-17	Intact
9	ME2921	N/A	4926	P5335-18	Intact
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
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>12/19/24</u>	Logbook Page No. N/A

FORM DC-1
SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page <u>3</u> of <u>3</u>
Received By (Print Name) <u>Casanova Rive</u>		Log-in Date 12/19/2024
Received By (Signature) <u>[Signature]</u>		
Case Number 51847	SDG No. ME2904	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>1z93947y0107684847</u> <u>3</u>
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	<u>2.3</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>12/19/2024</u>
12. Time Received	<u>10:32 10:33</u> ^{AM}

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding		Remarks: Condition of Sample Shipment, etc.
			Sample Tag #	Assigned Lab #	
1	ME2923	N/A	4948	P5335-19	Intact
2	ME2923D	N/A	4948	P5335-20	Intact
3	ME2923S	N/A	4948	P5335-21	Intact
4	N/A	N/A	N/A	N/A	N/A
5	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
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>12/19/24</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.	51847	SDG NO.	ME2904
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	4	✓	
3. Sample Log-In Sheet (DC-1)	5	7	✓	
4. CSF Inventory Sheet (DC-2)	8	10	✓	
5. SDG Narrative	11	15	✓	
6. Communication Logs	NA	NA	✓	
7. Percent Solids Log	16	17	✓	

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	18	36	✓	
9. Instrument raw data by instrument in analysis order	37	988	✓	

Other Data

10. Standard and Reagent Preparation Logs	989	1125	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	1126	1127	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	1128	1156	✓	
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	1157	1175	✓	
18. Instrument raw data by instrument in analysis order	1176	2180	✓	

Other Data

19. Standard and Reagent Preparation Logs	2181	2313	✓	
20. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	2314	2315	✓	
21. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	2316	2325	✓	
22. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

	<u>PAGE NOS:</u>		<u>CHECK</u>	
	<u>FROM</u>	<u>TO</u>	<u>LAB</u>	<u>REGION</u>
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	2326	2344	✓	
27 . Instrument raw data by instrument in analysis order	2345	2346	✓	

Other Data

28 . Standard and Reagent Preparation Logs	2347	2371	✓	
29 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	2372	2373	✓	
30 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	2374	2375	✓	
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	2376	2394	✓	
36 . Instrument raw data by instrument in analysis order	2395	2397	✓	

Other Data

37 . Standard and Reagent Preparation Logs	2398	2427	✓	
38 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	2428	2429	✓	
39 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	2430	2431	✓	
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 3)

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

PAGE NOs:		CHECK	
FROM	TO	LAB	REGION
2432	2434	✓	
NA	NA	✓	
2435	2438	✓	
NA	NA	✓	
2439	2442	✓	
NA	NA	✓	



**284 Sheffield Street
Mountainside, NJ 07092**

SDG NARRATIVE

USEPA

SDG # ME2904

CASE # 51847

CONTRACT # 68HERH20D0011

SOW# SFAM01.1

LAB NAME: Alliance Technical Group, LLC

LAB CODE: ACE

LAB ORDER ID # P5335

A. Number of Samples and Date of Receipt

19 Soil samples were delivered to the laboratory intact on 12/18/2024, 12/19/2024.

B. Parameters

Test requested for Metals CLP12 = Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium & Mercury, Cyanide.

Test requested for Metals CLP MS FULL = Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc

C. Cooler Temp

Indicator Bottle: Presence/Absence

Cooler: 2.1°C, 2.3°C

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

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

E. Corrective Action taken for above:

Resolution : 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.

Inter Element correction factors (IECs) are determined annually and correction factor are applied during



**284 Sheffield Street
Mountainside, NJ 07092**

ICP-AES analysis.

G. Calculation:

Calculation for ICP-AES Soil Sample:

Conversion of Results from mg/L or ppm to mg/kg (Dry Weight Basis):

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

Where,

C = Instrument value in ppm (The average of all replicate exposures)

V_f = Final digestion volume (mL)

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

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

DF = Dilution Factor

Example Calculation For Sample ME2904 For Aluminum :

If C = 22.78035 ppm

V_f = 100 ml

W = 1.46g

S = 0.858(85.8/100)

DF = 1

$$\text{Concentration (mg/kg)} = 22.78035 \times \frac{100}{1.46 \times 0.858} \times 1$$

$$= 1818.5290 \text{ mg/kg}$$

$$= 1800 \text{ mg/kg (Reported Result with Signification)}$$

Calculation for ICP-MS Soil Sample:

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

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

Where,

C = Instrument value in ppb (The average of all replicate integrations)

V_f = Final digestion volume (mL)

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

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

DF = Dilution Factor



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Mountainside, NJ 07092**

Example Calculation For Sample ME2904 For Arsenic :

If C = 8.85 ppb
Vf = 500 ml
W = 1.48 g
S = 0.858 (85.8/100)
DF = 1

$$\begin{aligned}\text{Concentration (mg/kg)} &= 8.85 \times \frac{500}{1.48 \times 0.858} \times 1 / 1000 \\ &= 3.48469 \text{ mg/kg} \\ &= 3.5 \text{ mg/kg (Reported Result with Signification)}\end{aligned}$$

Calculation for Hg Soil Sample:

Conversion of Results from $\mu\text{g/L}$ or ppb to mg/kg :

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

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 ME2904:

If C = 0.1054 ppb
Vf = 100 mL
W = 0.52g
S = 0.858(85.8/100)
DF = 1

$$\begin{aligned}\text{Concentration (mg/kg)} &= 0.1054 \times \frac{100}{0.52 \times 0.858} \times 1 / 1000 \\ &= 0.02362 \text{ mg/kg} \\ &= 0.024 \text{ mg/kg (Reported Result with Signification)}\end{aligned}$$



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Calculation for CN Soil Sample:

Conversion of Results from $\mu\text{g/L}$ or ppb to mg/kg:

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

Where,

C = Instrument response in $\mu\text{g/L}$ CN 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 ME2905:

If C = 4.7515 ppb

Vf = 50 ml

W = 1.03 g

S = 0.847(84.7/100)

DF = 1

$$\text{Concentration (mg/kg)} = 4.7515 \times \frac{50}{1.03 \times 0.847} \times 1 / 1000$$

$$= 0.272320 \text{ mg/kg}$$

$$= 0.27 \text{ mg/kg (Reported Result with Signification)}$$

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements. Duplicate sample did meet requirements. Serial Dilution did meet requirements.

Collision cell is being used to remove potential interferences. The analytes Na, Mg, Al, K, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As are being analyzed with collision cell and analytes Be, B, Ca, Ti, Se, Sr, Zr, Mo, Ag, Cd, Sn, Sb, Ba, Tl, Pb, U are being analyzed with Non-Collision Cell. Helium gas is used for the Collision Cell analysis.



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Internal Standard Association for ICP-MS analysis.

Target Analyte	Associated Internal Standard
Antimony	159Tb
Arsenic	89Y
Barium	159Tb
Beryllium	6Li
Cadmium	159Tb
Chromium	45Sc
Cobalt	45Sc
Copper	45Sc
Lead	209Bi
Manganese	45Sc
Nickel	45Sc
Selenium	89Y
Silver	159Tb
Thallium	209Bi
Vanadium	45Sc
Zinc	45Sc

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: Iwona
Analyst: jignesh
Date: 12/27/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 15:20
In Date: 12/19/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:48
Out Date: 12/20/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLIDS-OVEN

QC:LB134016

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
P5335-01	ME2904	1	1.14	8.40	9.54	8.35	85.8	
P5335-02	ME2905	2	1.16	8.82	9.98	8.63	84.7	
P5335-03	ME2906	3	1.12	8.76	9.88	7.66	74.7	
P5335-04	ME2907	4	1.16	8.71	9.87	7.87	77.0	
P5335-05	ME2908	5	1.18	8.50	9.68	8.01	80.4	
P5335-06	ME2909	6	1.19	8.65	9.84	7.25	70.1	
P5335-07	ME2910	7	1.18	8.76	9.94	8.81	87.1	
P5335-08	ME2911	8	1.15	8.50	9.65	7.95	80.0	
P5335-09	ME2912	9	1.15	8.44	9.59	7.58	76.2	
P5335-10	ME2913	10	1.19	8.45	9.64	8.03	80.9	
P5335-11	ME2914	11	1.17	8.54	9.71	7.81	77.8	
P5335-12	ME2915	12	1.16	8.58	9.74	7.63	75.4	
P5335-13	ME2916	13	1.15	8.77	9.92	8.57	84.6	
P5335-14	ME2917	14	1.19	8.52	9.71	7.73	76.8	
P5335-15	ME2918	15	1.19	8.55	9.74	7.7	76.1	
P5335-16	ME2919	16	1.15	8.82	9.97	8.01	77.8	
P5335-17	ME2920	17	1.18	8.46	9.64	7.49	74.6	
P5335-18	ME2921	18	1.13	8.76	9.89	8.05	79.0	
P5335-19	ME2923	19	1.17	8.81	9.98	8.35	81.5	
P5335-20	ME2923D	20	1.17	8.81	9.98	8.35	81.5	
P5335-21	ME2923S	21	1.17	8.81	9.98	8.35	81.5	

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

WORKLIST(Hardcopy Internal Chain)

B34016

WorkList Name : %1-p5335 WorkList ID : 186494 Department : Wet-Chemistry Date : 12-19-2024 14:16:52

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5335-01	ME2904	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/11/2024	Chemtech -SO
P5335-02	ME2905	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/11/2024	Chemtech -SO
P5335-03	ME2906	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/12/2024	Chemtech -SO
P5335-04	ME2907	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/12/2024	Chemtech -SO
P5335-05	ME2908	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/12/2024	Chemtech -SO
P5335-06	ME2909	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/12/2024	Chemtech -SO
P5335-07	ME2910	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/12/2024	Chemtech -SO
P5335-08	ME2911	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/12/2024	Chemtech -SO
P5335-09	ME2912	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-10	ME2913	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-11	ME2914	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-12	ME2915	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-13	ME2916	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-14	ME2917	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-15	ME2918	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-16	ME2919	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-17	ME2920	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-18	ME2921	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-19	ME2923	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/16/2024	Chemtech -SO
P5335-20	ME2923D	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/17/2024	Chemtech -SO
P5335-21	ME2923S	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	12/17/2024	Chemtech -SO

Date/Time 12-19-24 14:20
 Raw Sample Received by: JDCSM
 Raw Sample Relinquished by: JDCSM
 Date/Time 12-19-24 15:25
 Raw Sample Received by: JDCSM
 Raw Sample Relinquished by: JDCSM