RESL CUSTOMER EXPORT CONTROL AGREEMENT

It is the Radiological and Environmental Sciences Laboratory's (RESL) policy to conduct business in accordance with all applicable U.S. export control laws and regulations. It is also RESL's policy that its Customers comply with U.S. export control laws and regulations. Therefore, Customer agrees to the following:

1. Because products, technical data, and technical assistance (i.e., services) provided to Customer by RESL may be subject to U.S. export control laws and regulations, (i) transactions with certain persons and companies and (ii) the export or reexport of certain types and levels of products, technical data, and services are prohibited or restricted.

2. Customer acknowledges that it is responsible for its own compliance with U.S. export control laws and regulations. Customer further agrees that it assumes the responsibility to obtain all necessary U.S. export licenses or other U.S. governmental authorizations, as well as all liability for the failure to do so.

3. Customer acknowledges that export control requirements may change and that the export or reexport of RESL products, technical data, and services without an export license or other appropriate governmental authorization may result in criminal and/or civil liability.

4. The obligations and requirements described herein shall survive the expiration or termination of any agreement or contract between RESL and Customer.

MaS53 Participating Laboratories

Lab Code	Lab Name	Matrix Code
ADEM01	Alabama Department of Environmental Management	MaS
ADFC99	Abu Dhabi Quality and Conformity Council-Central Testing Lab	MaS
AFOH01	USAFSAM/OEA	MaS
AMEC99	Amentum Clean Energy Ltd	MaS
ARPL01	Analytical Support Operations - Radiochemical Processing Lab	MaS
ARSL01	ARS	MaS
AY1201	Consolidated Nuclear Security, LLC, ACO Laboratory	MaS
BSCE99	Supreme Council for Environment	MaS
BY1201	Consolidated Nuclear Security, LLC, ACO, Production Laboratory	MaS
CDHS01	California Department of Public Health	MaS
CESL01	Lawrence Livermore National Laboratory - EMRL	MaS
CMRC01	Carlsbad Environmental Monitoring and Research Center	MaS
COPS99	Health Canada Radiation Protection Bureau	MaS
EFGS01	Eurofins Frontier Global Sciences, LLC.	MaS
ERCL01	Washington State Public Health Laboratories	MaS
ERHD99	National Monitoring Section, Radiation Protection Bureau, Health Canada	MaS
ETTP01	MCLinc	MaS
FANR79	Federal Authority for Nuclear Regulation, Environmental Laboratory	MaS
FDHE01	Florida Dept of Health Environmental Laboratory	MaS
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab	MaS
GENE01	GEL Laboratories, LLC	MaS
GPCL01	Georgia Power Company Environmental Laboratory	MaS
HECR01	SC Department of Environmental Services	MaS
HPAC99	UKHSA, RCE Glasgow	MaS
HPAL01	Los Alamos National Laboratory	MaS
IAEA99	International Atomic Energy Agency	MaS
IDOH01	Indiana Department of Health	MaS
IEMA01	Illinois Emergency Management Agency Radiochemistry Laboratory	MaS
ISUE01	ISU Environmental Monitoring Laboratory	MaS
JLNN01	Jefferson Laboratory	MaS
JNRC99	Energy and Mineral Regulatory Commission	MaS
LOCK03	Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory	MaS
MART01	Southern Ohio Cleanup Company LLC	MaS
MART03	Radioactive Material Analysis Laboratory	MaS
NARL01	National Analytical Radiation Environmental Laboratory	MaS
NESI01	BWXT-Radioisotope & Analytical Chemistry Laboratory	MaS
NJDH01	New Jersey Dept. of Health, ECLS	MaS
NOCS99	National Oceanography Centre, Southampton	MaS
ODHL01	Ohio Department of Health Laboratory	MaS
OTLI01	Pace Analytical National Center for Testing & Innovation	MaS
RJLG01	RJ Lee Group - Columbia Basin Analytical Laboratories (CBAL)	MaS
RPSC01	Radiation Protection Service	MaS
SEML01	SRS Environmental Monitoring Laboratory	MaS
SLAC01	SLAC DOE National Accelerator Laboratory	MaS

SLDA01	USACE SLDA FUSRAP Project	MaS
SOUT01	Southwest Research Institute	MaS
SRPD01	Sandia National Laboratories, Radiation Protection Sample Diagnostics	MaS
STRL01	South Texas Project Radiological Laboratory	MaS
TDHL01	Texas Department of State Health Services Laboratory	MaS
TELE01	Teledyne Brown Engineering - Environmental Services	MaS
TELE02	Microbac Laboratories Inc. - Northbrook	MaS
TMAO01	EBERLINE Analytical Corporation	MaS
TNUT01	St. Louis USACE FUSRAP Laboratory	MaS
UNTE01	UniTech-235	MaS
WEST04	PACE ANALYTICAL SERVICES, GREENSBURG	MaS
WIPH01	WI, DPH, Radiation Protection Section	MaS
WSHL01	Wisconsin State Laboratory of Hygiene	MaS
YPGA01	US Army Yuma Proving Ground / Material Analysis Lab	MaS

Laboratories Not Reporting

Lab Code	Lab Name	Matrix Code
ANLB01	Argonne National Laboratory	MaS
ASUK99	AWE (Aldermaston)	MaS
IAEA59	IAEA-Equipment Radiation Monitoring Laboratory	MaS
MDPH01	MDPH-Division of Radiation Control	MaS
QUAN01	Eurofins St. Louis	MaS
SANC99	RadioAnalysis, South Africa Nuclear Energy Corp.	MaS
WIPP01	WIPP Laboratories	MaS

Study Reference Values

MAPEP-25-MaS53

Radiological Reference Date: 08/01/2025

Analyte	Ref Value	Ref Unc	Tot Mtl Ref Val	Tot Mtl Ref Unc	Units
Inorganic					
Antimony	4.66	0.18	5.98	0.07	(mg/kg)
Arsenic	7.4	0.2	7.4	0.3	(mg/kg)
Barium	129	4	522	17	(mg/kg)
Beryllium	2.29	0.03	3.26	0.08	(mg/kg)
Cadmium	0.724	0.013	0.76	0.02	(mg/kg)
Chromium	11.9	0.3	30.1	0.9	(mg/kg)
Cobalt	5.72	0.18	7.1	0.2	(mg/kg)
Copper	14.4	0.5	21.4	1.3	(mg/kg)
Lead	10.7	0.2	14.8	0.3	(mg/kg)
Mercury	0.0625	0.0013	0.0625	0.0013	(mg/kg)
Nickel	11.8	0.4	14.1	1.0	(mg/kg)
Selenium	1.68	0.03	1.72	0.04	(mg/kg)
Silver	2.48	0.05	2.67	0.05	(mg/kg)
Technetium-99	5.9E-4	0.11E-4			(mg/kg)
Thallium	1.10	0.02	1.44	0.04	(mg/kg)
Uranium-235	0.0244	0.0013			(mg/kg)
Uranium-238	5.50	0.19			(mg/kg)
Uranium-Total	5.53	0.19			(mg/kg)
Vanadium	35.5	1.1	64	3	(mg/kg)
Zinc	49	2	77	5	(mg/kg)

Analyte	Ref Value	Ref Unc	Units
Radiological			
Cesium-134	613	12	(Bq/kg)
Cesium-137	686	10	(Bq/kg)
Cobalt-60	1144	17	(Bq/kg)
Iron-55	518	11	(Bq/kg)
Manganese-54	771	15	(Bq/kg)
Neptunium-237	18.35	0.18	(Bq/kg)
Nickel-63	1474	30	(Bq/kg)
Plutonium-238	0.48	0.07	(Bq/kg)
Plutonium-239/240	0.33	0.07	(Bq/kg)
Potassium-40	492	15	(Bq/kg)
Strontium-90	737	15	(Bq/kg)
Technetium-99	370	7	(Bq/kg)
Thorium-228	41.7	0.6	(Bq/kg)
Thorium-230	45.6	0.8	(Bq/kg)
Thorium-232	38.7	1.0	(Bq/kg)
Uranium-234	35.9	1.2	(Bq/kg)
Uranium-238	68	2	(Bq/kg)

Sample Statistical Summary

MAPEP-25-MaS53

Radiological Reference Date: 08/01/2025

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range	Units
Inorganic								
Antimony	8	6	4.59	0.69	4.66	0.18	3.26 - 6.06	(mg/kg)
Arsenic	9	9	6.9	0.3	7.4	0.2	5.2 - 9.6	(mg/kg)
Barium	8	8	124	7	129	4	90 - 168	(mg/kg)
Beryllium	9	9	2.34	0.18	2.29	0.03	1.60 - 2.98	(mg/kg)
Cadmium	9	8	0.699	0.058	0.724	0.013	0.507 - 0.941	(mg/kg)
Chromium	9	7	13.4	1.3	11.9	0.3	8.3 - 15.5	(mg/kg)
Cobalt	9	8	5.84	0.63	5.72	0.18	4.00 - 7.44	(mg/kg)
Copper	9	9	15.0	1.7	14.4	0.5	10.1 - 18.7	(mg/kg)
Lead	9	9	10.9	1.4	10.7	0.2	7.5 - 13.9	(mg/kg)
Mercury	8	7	0.0603	0.0089	0.0625	0.0013	0.0438 - 0.0813	(mg/kg)
Nickel	9	8	12.1	1.0	11.8	0.4	8.3 - 15.3	(mg/kg)
Selenium	8	5			1.68	0.03	1.18 - 2.18	(mg/kg)
Silver	9	8	2.33	0.14	2.48	0.05	1.74 - 3.22	(mg/kg)
Technetium-99	3	3			5.9E-4	0.11E-4	4.13E-4 - 7.67E-4	(mg/kg)
Thallium	9	9	1.04	0.10	1.10	0.02	0.77 - 1.43	(mg/kg)
Uranium-235	12	9	0.0237	0.0039	0.0244	0.0013	0.0171 - 0.0317	(mg/kg)
Uranium-238	12	11	4.96	0.67	5.50	0.19	3.85 - 7.15	(mg/kg)
Uranium-Total	11	9	5.08	0.69	5.53	0.19	3.87 - 7.19	(mg/kg)
Vanadium	9	9	34.2	3.6	35.5	1.1	24.9 - 46.2	(mg/kg)
Zinc	9	8	53	6	49	2	34 - 64	(mg/kg)

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range	Units
Radiological								
Americium-241	30	24					False Positive Test	(Bq/kg)
Cesium-134	52	48	599	57	613	12	429 - 797	(Bq/kg)
Cesium-137	52	51	708	53	686	10	480 - 892	(Bq/kg)
Cobalt-57	45	34					False Positive Test	(Bq/kg)
Cobalt-60	52	51	1163	89	1144	17	801 - 1487	(Bq/kg)
Iron-55	6	2			518	11	363 - 673	(Bq/kg)
Manganese-54	52	51	796	59	771	15	540 - 1002	(Bq/kg)
Neptunium-237	10	5			18.35	0.18	12.85 - 23.86	(Bq/kg)
Nickel-63	9	7	1422	243	1474	30	1032 - 1916	(Bq/kg)
Plutonium-238	24	21	1.14	2.41	0.48	0.07	Sensitivity Evaluation	(Bq/kg)
Plutonium-239/240	24	21	1.09	1.98	0.33	0.07	Sensitivity Evaluation	(Bq/kg)
Potassium-40	52	50	512	49	492	15	344 - 640	(Bq/kg)
Strontium-90	21	20	682	75	737	15	516 - 958	(Bq/kg)
Technetium-99	15	14	336	46	370	7	259 - 481	(Bq/kg)
Thorium-228	18	17	43.4	5.2	41.7	0.6	29.2 - 54.2	(Bq/kg)
Thorium-230	18	15	49.0	4.6	45.6	0.8	31.9 - 59.3	(Bq/kg)
Thorium-232	19	16	40.5	4.1	38.7	1.0	27.1 - 50.3	(Bq/kg)
Uranium-234	24	19	35.4	3.6	35.9	1.2	25.1 - 46.7	(Bq/kg)
Uranium-238	27	23	64	8	68	2	48 - 88	(Bq/kg)
Zinc-65	44	40					False Positive Test	(Bq/kg)

Note: (1) T = Total number of laboratories reporting analyte.
(2) A = Number of laboratories with 'Acceptable' performance.
(3) Mean excludes values derived as total metals and values indicated as "Not Acceptable".

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Flag Summary Report

MAPEP-25-MaS53

Inorganic				
Analyte	**A**	**W**	**RW**	**N**
Antimony	5	1		2
Arsenic	9			
Barium	8			
Beryllium	9			
Cadmium	8			1
Chromium	5	2		2
Cobalt	8			1
Copper	8	1		
Lead	8	1		
Mercury	6	1		1
Nickel	8			1
Selenium	3	2		3
Silver	8			1
Thallium	7	2		
Uranium-Total	7	2		2
Uranium-235	7	2		3
Uranium-238	8	3		1
Vanadium	9			
Zinc	7	1		1
Technetium-99	1	2		

Radiological				
Analyte	**A**	**W**	**RW**	**N**
Americium-241	24			7
Cesium-134	47	1		2
Cesium-137	49	2		1
Cobalt-57	34			18
Cobalt-60	51			1
Iron-55	2			4
Manganese-54	50	1		1
Neptunium-237	5			5
Nickel-63	5	2		2
Plutonium-238	21			3
Plutonium-239/240	21			3
Potassium-40	46	4		2
Strontium-90	17	3		1
Technetium-99	12	2		1
Thorium-228	15	2		1
Thorium-230	12	3		3
Thorium-232	15	1		3
Uranium-234	18	1		5
Uranium-238	18	5		4
Zinc-65	40			12

Laboratory Results For MAPEP-25-MaS53
(ADEM01) Alabama Department of Environmental Management
1350 Coliseum Blvd.
Montgomery, AL 36110

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	521.0000	613	A		-15.0	429 - 797	17.4000	A
Cesium-137	635.0000	686	A		-7.4	480 - 892	26.4000	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1060.0000	1144	A		-7.3	801 - 1487	26.5000	A
Iron-55	NR	518				363 - 673		
Manganese-54	709.0000	771	A		-8.0	540 - 1002	33.2000	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	504.0000	492	A		2.4	344 - 640	39.2000	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(ADFC99) Abu Dhabi Quality and Conformity Council-Central Testing Lab
Radiation Lab
Abu Dhabi, Abu Dhabi 853

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	585	613	A		-4.6	429 - 797	32	A
Cesium-137	739	686	A		7.7	480 - 892	49	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1124	1144	A		-1.7	801 - 1487	68	A
Iron-55	NR	518				363 - 673		
Manganese-54	790	771	A		2.5	540 - 1002	92	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	485	492	A		-1.4	344 - 640	45	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(AFOH01) USAFSAM/OEA
2510 Fifth Street, Area B
Wright-Patterson AFB, OH 45433-7913

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.4		A			False Positive Test	0.5	
Cesium-134	564	613	A		-8.0	429 - 797	14	A
Cesium-137	617	686	A		-10.1	480 - 892	20	A
Cobalt-57	2		A			False Positive Test	1	
Cobalt-60	1036	1144	A		-9.4	801 - 1487	22	A
Iron-55	NR	518				363 - 673		
Manganese-54	681	771	A		-11.7	540 - 1002	21	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.02	0.48	A	(17)		Sensitivity Evaluation	0.23	
Plutonium-239/240	0.2	0.33	A	(17)		Sensitivity Evaluation	0.3	
Potassium-40	425	492	A		-13.6	344 - 640	17	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	757	737	A		2.7	516 - 958	28	A
Technetium-99	NR	370				259 - 481		
Thorium-228	57.4	41.7	N		37.7	29.2 - 54.2	4.3	A
Thorium-230	52.7	45.6	A		15.6	31.9 - 59.3	3.9	A
Thorium-232	52.0	38.7	N		34.4	27.1 - 50.3	3.8	A
Uranium-234	39.8	35.9	A		10.9	25.1 - 46.7	3.6	A
Uranium-238	70.9	68	A		4.3	48 - 88	5.2	A
Zinc-65	-5		A			False Positive Test	3	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(AMEC99) Amentum Clean Energy Ltd
612 Faraday Street
Birchwood Park, Warrington WA3 6GN

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	3.49		N	(1)		False Positive Test	0.75	
Cesium-134	571	613	A		-6.9	429 - 797	20	A
Cesium-137	682	686	A		-0.6	480 - 892	25	A
Cobalt-57	1.14		A			False Positive Test	0.78	
Cobalt-60	1123	1144	A		-1.8	801 - 1487	39	A
Iron-55	460	518	A		-11.2	363 - 673	170	N
Manganese-54	761	771	A		-1.3	540 - 1002	28	A
Neptunium-237	33.9	18.35	N		84.7	12.85 - 23.86	4.7	A
Nickel-63	1530	1474	A		3.8	1032 - 1916	220	A
Plutonium-238	0.11	0.48	A	(17)		Sensitivity Evaluation	0.12	
Plutonium-239/240	1.03	0.33	A	(17)		Sensitivity Evaluation	0.35	
Potassium-40	485	492	A		-1.4	344 - 640	22	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	722	737	A		-2.0	516 - 958	46	A
Technetium-99	308	370	A		-16.8	259 - 481	78	W
Thorium-228	36.7	41.7	A		-12.0	29.2 - 54.2	4.2	A
Thorium-230	72.1	45.6	N		58.1	31.9 - 59.3	7.4	A
Thorium-232	38.8	38.7	A		0.3	27.1 - 50.3	4.4	A
Uranium-234	34.8	35.9	A		-3.1	25.1 - 46.7	1.5	A
Uranium-238	63.8	68	A		-6.2	48 - 88	2.3	A
Zinc-65	6.4		A			False Positive Test	5.7	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(ARPL01) Analytical Support Operations - Radiochemical Processing Lab
PO Box 999
Richland, WA 99354

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	626	613	A		2.1	429 - 797	24	A
Cesium-137	724	686	A		5.5	480 - 892	31	A
Cobalt-57	1.4		N	(1)		False Positive Test	0.4	
Cobalt-60	1206	1144	A		5.4	801 - 1487	51	A
Iron-55	NR	518				363 - 673		
Manganese-54	808	771	A		4.8	540 - 1002	32	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	508	492	A		3.3	344 - 640	24	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	4.9		A			False Positive Test	2.8	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(ARSL01) ARS
2609 North River Road
Port Allen, LA 70767

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	2.225		N	(1)		False Positive Test	0.731	
Cesium-134	541.74	613	A		-11.6	429 - 797	18.535	A
Cesium-137	652.88	686	A		-4.8	480 - 892	16.006	A
Cobalt-57	1.18		A			False Positive Test	0.428	
Cobalt-60	1140	1144	A		-0.4	801 - 1487	24.262	A
Iron-55	NR	518				363 - 673		
Manganese-54	755.15	771	A		-2.1	540 - 1002	25.72	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	499.72	492	A		1.6	344 - 640	20.674	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	320.086	370	A		-13.5	259 - 481	41.161	A
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	-4.088		A			False Positive Test	3.581	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

MAPEP Mixed Analyte Performance Evaluation Program

Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-MaS53

(AY1201) Consolidated Nuclear Security, LLC, ACO Laboratory
Y12, NSC, Bldg. 9995, Rm 142
Oak Ridge, TN 37831-8189

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	15.6	4.66	N		234.8	3.26 - 6.06	0.824	A
Arsenic	6.78	7.4	A		-8.4	5.2 - 9.6	0.896	A
Barium	128	129	A		-0.8	90 - 168	5.210	A
Beryllium	2.37	2.29	A		3.5	1.60 - 2.98	0.148	A
Cadmium	0.714	0.724	A		-1.4	0.507 - 0.941	0.080	A
Chromium	14.9	11.9	W		25.2	8.3 - 15.5	0.469	A
Cobalt	6.10	5.72	A		6.6	4.00 - 7.44	0.305	A
Copper	15.8	14.4	A		9.7	10.1 - 18.7	1.958	A
Lead	12.1	10.7	A		13.1	7.5 - 13.9	0.789	A
Mercury	0.0630	0.0625	A		0.8	0.0438 - 0.0813	0.0066	A
Nickel	13.0	11.8	A		10.2	8.3 - 15.3	0.642	A
Selenium	0.867	1.68	N		-48.4	1.18 - 2.18	0.141	W
Silver	2.12	2.48	A		-14.5	1.74 - 3.22	0.217	A
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	1.04	1.10	A		-5.5	0.77 - 1.43	0.128	A
Uranium-235	0.028	0.0244	A		14.8	0.0171 - 0.0317	0.0027	A
Uranium-238	5.84	5.50	A		6.2	3.85 - 7.15	0.5	A
Uranium-Total	5.87	5.53	A		6.1	3.87 - 7.19	0.5	A
Vanadium	37.1	35.5	A		4.5	24.9 - 46.2	1.410	A
Zinc	57.6	49	A		17.6	34 - 64	3.606	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.67		A			False Positive Test	0.72	
Cesium-134	NR	613		(6)		429 - 797		
Cesium-137	750	686	A		9.3	480 - 892	24	A
Cobalt-57	1.3		A			False Positive Test	0.54	
Cobalt-60	1300	1144	A		13.6	801 - 1487	26	A
Iron-55	NR	518				363 - 673		
Manganese-54	870	771	A		12.8	540 - 1002	270	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.11	0.48	A	(17)		Sensitivity Evaluation	0.17	
Plutonium-239/240	0.21	0.33	A	(17)		Sensitivity Evaluation	0.19	
Potassium-40	570	492	A		15.9	344 - 640	50	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	470	737	N		-36.2	516 - 958	160	N
Technetium-99	333	370	A		-10.0	259 - 481	20	A
Thorium-228	42	41.7	A		0.7	29.2 - 54.2	3.8	A
Thorium-230	46	45.6	A		0.9	31.9 - 59.3	3.1	A
Thorium-232	39	38.7	A		0.8	27.1 - 50.3	3.6	A
Uranium-234	35	35.9	A		-2.5	25.1 - 46.7	4.2	A
Uranium-238	47	68	N		-30.9	48 - 88	5.1	A
Zinc-65	-8.9		A			False Positive Test	5.7	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(BSCE99) Supreme Council for Environment
P. O. Box 18233
Manama, Manama 18233

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.39		A			False Positive Test	0.37	
Cesium-134	601.52	613	A		-1.9	429 - 797	28.82	A
Cesium-137	672.88	686	A		-1.9	480 - 892	56.04	A
Cobalt-57	1.50		N	(1)		False Positive Test	0.30	
Cobalt-60	1122.93	1144	A		-1.8	801 - 1487	61.38	A
Iron-55	NR	518				363 - 673		
Manganese-54	747.59	771	A		-3.0	540 - 1002	62.24	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	461.62	492	A		-6.2	344 - 640	30.80	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	46.07	38.7	A		19.0	27.1 - 50.3	3.07	A
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	44.16	68	N		-35.1	48 - 88	5.26	A
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(BY1201) Consolidated Nuclear Security, LLC, ACO, Production Laboratory
Y12, NSC, Bldg. 9995, Rm 142
Oak Ridge, TN 37831-8189

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.2		A			False Positive Test	0.64	
Cesium-134	NR	613		(6)		429 - 797		
Cesium-137	750.33	686	A		9.4	480 - 892	20.47	A
Cobalt-57	2		A			False Positive Test	0.81	
Cobalt-60	1213	1144	A		6.0	801 - 1487	32.90	A
Iron-55	NR	518				363 - 673		
Manganese-54	873.3	771	A		13.3	540 - 1002	26.77	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	-0.357	0.48	A	(17)		Sensitivity Evaluation	.54	
Plutonium-239/240	-0.007	0.33	A	(17)		Sensitivity Evaluation	.428	
Potassium-40	603	492	W		22.6	344 - 640	30.0	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	631.31	737	A		-14.3	516 - 958	23.36	A
Technetium-99	366	370	A		-1.1	259 - 481	22.82	A
Thorium-228	36.6	41.7	A		-12.2	29.2 - 54.2	4.53	A
Thorium-230	41.3	45.6	A		-9.4	31.9 - 59.3	5.15	A
Thorium-232	35.8	38.7	A		-7.5	27.1 - 50.3	4.5	A
Uranium-234	38.7	35.9	A		7.8	25.1 - 46.7	4.57	A
Uranium-238	59.2	68	A		-12.9	48 - 88	5.50	A
Zinc-65	6		N	(1)		False Positive Test	1.41	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(CDHS01) California Department of Public Health
Drinking Water & Radiation Lab.
Richmond, CA 94804-6403

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0382		A			False Positive Test	0.237	
Cesium-134	597	613	A		-2.6	429 - 797	29.1	A
Cesium-137	766	686	A		11.7	480 - 892	35.4	A
Cobalt-57	0.788		A			False Positive Test	1.03	
Cobalt-60	1257	1144	A		9.9	801 - 1487	34.0	A
Iron-55	491	518	A		-5.2	363 - 673	34.3	A
Manganese-54	876	771	A		13.6	540 - 1002	33.3	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	1901	1474	W		29.0	1032 - 1916	36.7	N
Plutonium-238	0.277	0.48	A	(17)		Sensitivity Evaluation	0.140	
Plutonium-239/240	0.457	0.33	A	(17)		Sensitivity Evaluation	0.197	
Potassium-40	578	492	A		17.5	344 - 640	29.7	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	559	737	W		-24.2	516 - 958	5.90	N
Technetium-99	424	370	A		14.6	259 - 481	23.9	A
Thorium-228	51.7	41.7	W		24.0	29.2 - 54.2	4.10	A
Thorium-230	65.6	45.6	N		43.9	31.9 - 59.3	4.56	A
Thorium-232	43.9	38.7	A		13.4	27.1 - 50.3	3.60	A
Uranium-234	36.5	35.9	A		1.7	25.1 - 46.7	1.37	A
Uranium-238	66.3	68	A		-2.5	48 - 88	2.00	A
Zinc-65	-0.690		A			False Positive Test	2.12	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(CESL01) Lawrence Livermore National Laboratory - EMRL
7000 East Avenue
Livermore, CA 94551

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	6.14E+02	613	A		0.2	429 - 797	1.32	A
Cesium-137	6.74E+02	686	A		-1.7	480 - 892	2.87	A
Cobalt-57	1.88E+00		A			False Positive Test	1.79	
Cobalt-60	1.15E+03	1144	A		0.5	801 - 1487	2.59	A
Iron-55	NR	518				363 - 673		
Manganese-54	7.66E+02	771	A		-0.6	540 - 1002	2.57	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	9.24E-02	0.48	A	(17)		Sensitivity Evaluation	6.40E-02	
Plutonium-239/240	2.76E-01	0.33	A	(17)		Sensitivity Evaluation	9.32E-02	
Potassium-40	4.70E+02	492	A		-4.5	344 - 640	3.54	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	1.56E+01		A			False Positive Test	9.53	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(CMRC01) Carlsbad Environmental Monitoring and Research Center
1400 University Dr.
Carlsbad, NM 88220

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	5.55E+00		N	(1)		False Positive Test	5.91E-01	
Cesium-134	6.18E+02	613	A		0.8	429 - 797	9.47	N
Cesium-137	8.39E+02	686	W		22.3	480 - 892	1.41	N
Cobalt-57	1.12E+00		N	(1)		False Positive Test	2.81E-01	
Cobalt-60	1.31E+03	1144	A		14.5	801 - 1487	3.77	A
Iron-55	NR	518				363 - 673		
Manganese-54	9.45E+02	771	W		22.6	540 - 1002	1.40	N
Neptunium-237	1.76E+01	18.35	A		-4.1	12.85 - 23.86	9.38E-01	A
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48	N	(18)		Sensitivity Evaluation		
Plutonium-239/240	NR	0.33	N	(18)		Sensitivity Evaluation		
Potassium-40	6.19E+02	492	W		25.8	344 - 640	2.43	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	7.25E+02	737	A		-1.6	516 - 958	1.01	N
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	2.98E+01	35.9	A		-17.0	25.1 - 46.7	2.32	A
Uranium-238	5.40E+01	68	W		-20.6	48 - 88	3.77	A
Zinc-65	-3.50E+00		N	(29)		False Positive Test	1.07	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(COPS99) Health Canada Radiation Protection Bureau
775 Brookfield Road
Ottawa, Ontario K1A 1C1

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	675.9	613	A		10.3	429 - 797	12.84	N
Cesium-137	733.24	686	A		6.9	480 - 892	43.99	A
Cobalt-57	0.92		A			False Positive Test	0.4	
Cobalt-60	1351.5	1144	A		18.1	801 - 1487	32.44	A
Iron-55	NR	518				363 - 673		
Manganese-54	816.07	771	A		5.8	540 - 1002	48.96	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	471.09	492	A		-4.3	344 - 640	23.55	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	0.438		A			False Positive Test	0.193	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(EFGS01) Eurofins Frontier Global Sciences, LLC.
5755 8th St. E
Tacoma, WA 98424

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	0.051	0.0625	A		-18.4	0.0438 - 0.0813	0.003	A
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR	613				429 - 797		
Cesium-137	NR	686				480 - 892		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	1144				801 - 1487		
Iron-55	NR	518				363 - 673		
Manganese-54	NR	771				540 - 1002		
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	NR	492				344 - 640		

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(ERCL01) Washington State Public Health Laboratories
1610 N.E. 150th Street
Shoreline, WA 98155-9701

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	0.0260	0.0244	A		6.6	0.0171 - 0.0317	0.0035	A
Uranium-238	5.90	5.50	A		7.3	3.85 - 7.15	0.76	A
Uranium-Total	5.90	5.53	A		6.7	3.87 - 7.19	0.76	A
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.56		A			False Positive Test	0.34	
Cesium-134	722	613	A		17.8	429 - 797	4	N
Cesium-137	714	686	A		4.1	480 - 892	8	N
Cobalt-57	1.00		A			False Positive Test	0.66	
Cobalt-60	1200	1144	A		4.9	801 - 1487	10	N
Iron-55	NR	518				363 - 673		
Manganese-54	803	771	A		4.2	540 - 1002	68	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.22	0.48	A	(17)		Sensitivity Evaluation	0.34	
Plutonium-239/240	0.22	0.33	A	(17)		Sensitivity Evaluation	0.30	
Potassium-40	507	492	A		3.0	344 - 640	26	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	777	737	A		5.4	516 - 958	23	A
Technetium-99	NR	370				259 - 481		
Thorium-228	43.3	41.7	A		3.8	29.2 - 54.2	5.5	A
Thorium-230	55.5	45.6	W		21.7	31.9 - 59.3	6.4	A
Thorium-232	47.7	38.7	W		23.3	27.1 - 50.3	5.3	A
Uranium-234	36.3	35.9	A		1.1	25.1 - 46.7	2.4	A
Uranium-238	65.9	68	A		-3.1	48 - 88	3.4	A
Zinc-65	-0.6		A			False Positive Test	1.7	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53

(ERHD99) National Monitoring Section, Radiation Protection Bureau, Health Canada
775 Brookfield Road AL6302D1
Ottawa, Ontario K1A 1C1

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	6.1	7.4	A		-17.6	5.2 - 9.6	0.36	A
Barium	NR	129				90 - 168		
Beryllium	2.723	2.29	A		18.9	1.60 - 2.98	0.09	A
Cadmium	0.643	0.724	A		-11.2	0.507 - 0.941	0.02	A
Chromium	16.24	11.9	N		36.5	8.3 - 15.5	1.29	A
Cobalt	5.97	5.72	A		4.4	4.00 - 7.44	0.07	N
Copper	12.49	14.4	A		-13.3	10.1 - 18.7	.45	A
Lead	10.677	10.7	A		-0.2	7.5 - 13.9	0.6	A
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	11.874	11.8	A		0.6	8.3 - 15.3	0.25	A
Selenium	NR	1.68				1.18 - 2.18		
Silver	2.35	2.48	A		-5.2	1.74 - 3.22	0.06	A
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	1.13	1.10	A		2.7	0.77 - 1.43	0.01	N
Uranium-235	0.0284	0.0244	A		16.4	0.0171 - 0.0317	0.001	A
Uranium-238	4.29	5.50	W		-22.0	3.85 - 7.15	0.16	A
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	36.7	35.5	A		3.4	24.9 - 46.2	1.1	A
Zinc	48.8	49	A		-0.4	34 - 64	1.9	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	3.08		N	(1)		False Positive Test	0.47	
Cesium-134	515	613	A		-16.0	429 - 797	38	A
Cesium-137	543	686	W		-20.8	480 - 892	41	A
Cobalt-57	1		A			False Positive Test	2.2	
Cobalt-60	944	1144	A		-17.5	801 - 1487	77	A
Iron-55	NR	518				363 - 673		
Manganese-54	624	771	A		-19.1	540 - 1002	44	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.10	0.48	A	(17)		Sensitivity Evaluation	0.25	
Plutonium-239/240	0.10	0.33	A	(17)		Sensitivity Evaluation	0.25	
Potassium-40	400	492	A		-18.7	344 - 640	36	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	798	737	A		8.3	516 - 958	26	A
Technetium-99	NR	370				259 - 481		
Thorium-228	40.5	41.7	A		-2.9	29.2 - 54.2	2.3	A
Thorium-230	48.4	45.6	A		6.1	31.9 - 59.3	2.4	A
Thorium-232	31.6	38.7	A		-18.3	27.1 - 50.3	1.9	A
Uranium-234	37.3	35.9	A		3.9	25.1 - 46.7	1.7	A
Uranium-238	68.1	68	A		0.1	48 - 88	2.2	A
Zinc-65	2.7		A			False Positive Test	4.2	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(ETTP01) MCLinc
161 Mitchell Road
Oak Ridge, Tennessee 37830

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.40	4.66	A		15.9	3.26 - 6.06	0.54	A
Arsenic	6.85	7.4	A		-7.4	5.2 - 9.6	0.68	A
Barium	126.4	129	A		-2.0	90 - 168	7.54	A
Beryllium	2.4	2.29	A		4.8	1.60 - 2.98	0.17	A
Cadmium	0.68	0.724	A		-6.1	0.507 - 0.941	0.050	A
Chromium	14.2	11.9	A		19.3	8.3 - 15.5	1.46	A
Cobalt	4.8	5.72	A		-16.1	4.00 - 7.44	0.30	A
Copper	15.0	14.4	A		4.2	10.1 - 18.7	0.83	A
Lead	11.1	10.7	A		3.7	7.5 - 13.9	0.61	A
Mercury	0.055	0.0625	A		-12.0	0.0438 - 0.0813	0.0028	A
Nickel	11.3	11.8	A		-4.2	8.3 - 15.3	0.81	A
Selenium	1.7	1.68	A		1.2	1.18 - 2.18	0.19	A
Silver	2.3	2.48	A		-7.3	1.74 - 3.22	0.19	A
Technetium-99	0.00047	5.9E-4	W		-20.3	4.13E-4 - 7.67E-4	0.000023	A
Thallium	0.98	1.10	A		-10.9	0.77 - 1.43	0.046	A
Uranium-235	0.022	0.0244	A		-9.8	0.0171 - 0.0317	0.0011	A
Uranium-238	4.87	5.50	A		-11.5	3.85 - 7.15	0.24	A
Uranium-Total	4.9	5.53	A		-11.4	3.87 - 7.19	0.25	A
Vanadium	35	35.5	A		-1.4	24.9 - 46.2	3.36	A
Zinc	54.8	49	A		11.8	34 - 64	9.39	W

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR	613				429 - 797		
Cesium-137	NR	686				480 - 892		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	1144				801 - 1487		
Iron-55	NR	518				363 - 673		
Manganese-54	NR	771				540 - 1002		
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	NR	492				344 - 640		

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	296.29	370	A		-19.9	259 - 481	14.8	A
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(FANR79) Federal Authority for Nuclear Regulation, Environmental Laboratory
Zayed University, gate number 5
Abu Dhabi, Abu Dhabi 00971

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	583	613	A		-4.9	429 - 797	43.5	A
Cesium-137	769	686	A		12.1	480 - 892	149	W
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1150	1144	A		0.5	801 - 1487	136	A
Iron-55	NR	518				363 - 673		
Manganese-54	771	771	A		0.0	540 - 1002	125	W
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	598	492	W		21.5	344 - 640	111	W

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

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Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(FDHE01) Florida Dept of Health Environmental Laboratory
2100 All Childrens Way
Orlando, FL 32818-5271

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.95		A			False Positive Test	3.08	
Cesium-134	647.91	613	A		5.7	429 - 797	12.21	N
Cesium-137	686.25	686	A		0.0	480 - 892	15.3	A
Cobalt-57	0.9		A			False Positive Test	0.49	
Cobalt-60	1127.5	1144	A		-1.4	801 - 1487	18.53	N
Iron-55	NR	518				363 - 673		
Manganese-54	791.5	771	A		2.7	540 - 1002	17.03	A
Neptunium-237	42.6	18.35	N		132.2	12.85 - 23.86	1.86	A
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	8.62	0.48	A	(17)		Sensitivity Evaluation	3.6	
Plutonium-239/240	8.97	0.33	A	(17)		Sensitivity Evaluation	3.4	
Potassium-40	496.5	492	A		0.9	344 - 640	14.58	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	735.23	737	A		-0.2	516 - 958	69.55	A
Technetium-99	NR	370				259 - 481		
Thorium-228	44	41.7	A		5.5	29.2 - 54.2	4.4	A
Thorium-230	47.13	45.6	A		3.4	31.9 - 59.3	4.1	A
Thorium-232	43.75	38.7	A		13.0	27.1 - 50.3	4.1	A
Uranium-234	51.85	35.9	N		44.4	25.1 - 46.7	4.47	A
Uranium-238	68.59	68	A		0.9	48 - 88	5.44	A
Zinc-65	1.21		A			False Positive Test	3	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(FDOH01) Florida Dept. of Health, Mobile Environmental Radiological Lab
2100 All Childrens Way
Orlando, FL 32818-5271

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	3.33		A			False Positive Test	3.45	
Cesium-134	685.69	613	A		11.9	429 - 797	8.69	N
Cesium-137	681.37	686	A		-0.7	480 - 892	11.78	N
Cobalt-57	0.77		A			False Positive Test	2.35	
Cobalt-60	1132.51	1144	A		-1.0	801 - 1487	15.42	N
Iron-55	NR	518				363 - 673		
Manganese-54	782.76	771	A		1.5	540 - 1002	13.09	N
Neptunium-237	44.69	18.35	N		143.5	12.85 - 23.86	1.9	A
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	520.24	492	A		5.7	344 - 640	14.77	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	72.66	68	A		6.9	48 - 88	7.26	A
Zinc-65	9.08		A			False Positive Test	3.6	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(GENE01) GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	4.19	4.66	A		-10.1	3.26 - 6.06	0.296	A
Arsenic	7.11	7.4	A		-3.9	5.2 - 9.6	0.497	A
Barium	113	129	A		-12.4	90 - 168	7.54	A
Beryllium	2.32	2.29	A		1.3	1.60 - 2.98	0.158	A
Cadmium	0.687	0.724	A		-5.1	0.507 - 0.941	0.0546	A
Chromium	11.8	11.9	A		-0.8	8.3 - 15.5	0.788	A
Cobalt	5.33	5.72	A		-6.8	4.00 - 7.44	0.358	A
Copper	14.5	14.4	A		0.7	10.1 - 18.7	0.970	A
Lead	10.2	10.7	A		-4.7	7.5 - 13.9	0.686	A
Mercury	0.0641	0.0625	A		2.6	0.0438 - 0.0813	0.00485	A
Nickel	10.8	11.8	A		-8.5	8.3 - 15.3	0.719	A
Selenium	2.83	1.68	N		68.5	1.18 - 2.18	0.198	A
Silver	2.22	2.48	A		-10.5	1.74 - 3.22	0.151	A
Technetium-99	0.000684	5.9E-4	A		15.9	4.13E-4 - 7.67E-4	5.61E-05	A
Thallium	0.980	1.10	A		-10.9	0.77 - 1.43	0.0666	A
Uranium-235	0.0217	0.0244	A		-11.1	0.0171 - 0.0317	0.000588	A
Uranium-238	4.73	5.50	A		-14.0	3.85 - 7.15	0.162	A
Uranium-Total	4.75	5.53	A		-14.1	3.87 - 7.19	0.162	A
Vanadium	29.5	35.5	A		-16.9	24.9 - 46.2	1.97	A
Zinc	44.8	49	A		-8.6	34 - 64	2.99	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.449		A			False Positive Test	0.755	
Cesium-134	523	613	A		-14.7	429 - 797	28.1	A
Cesium-137	676	686	A		-1.5	480 - 892	28.4	A
Cobalt-57	1.61		A			False Positive Test	0.648	
Cobalt-60	1090	1144	A		-4.7	801 - 1487	66.7	A
Iron-55	1240	518	N		139.4	363 - 673	216	W
Manganese-54	769	771	A		-0.3	540 - 1002	44.1	A
Neptunium-237	0.465	18.35	N		-97.5	12.85 - 23.86	0.0435	A
Nickel-63	1130	1474	W		-23.3	1032 - 1916	112	A
Plutonium-238	0.0987	0.48	A	(17)		Sensitivity Evaluation	0.628	
Plutonium-239/240	0.831	0.33	A	(17)		Sensitivity Evaluation	0.661	
Potassium-40	514	492	A		4.5	344 - 640	32.5	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	552	737	W		-25.1	516 - 958	51.5	A
Technetium-99	433	370	A		17.0	259 - 481	43	A
Thorium-228	42.8	41.7	A		2.6	29.2 - 54.2	4.26	A
Thorium-230	51.6	45.6	A		13.2	31.9 - 59.3	4.65	A
Thorium-232	42.4	38.7	A		9.6	27.1 - 50.3	3.96	A
Uranium-234	33.8	35.9	A		-5.9	25.1 - 46.7	2.66	A
Uranium-238	62.0	68	A		-8.8	48 - 88	4.04	A
Zinc-65	-1.20		A			False Positive Test	2.02	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(GPCL01) Georgia Power Company Environmental Laboratory
2480 Maner Road
Atlanta, GA 30339

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	636.36	613	A		3.8	429 - 797	43.58	A
Cesium-137	719.04	686	A		4.8	480 - 892	55.57	A
Cobalt-57	0.21		A			False Positive Test	2.65	
Cobalt-60	1149.92	1144	A		0.5	801 - 1487	86.15	A
Iron-55	NR	518				363 - 673		
Manganese-54	816.66	771	A		5.9	540 - 1002	63.15	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	547.02	492	A		11.2	344 - 640	47.29	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	1.71		A			False Positive Test	8.96	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(HECR01) SC Department of Environmental Services
8231 Parklane Road
Columbia, SC 29223

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	628.4	613	A		2.5	429 - 797	24.58	A
Cesium-137	723.3	686	A		5.4	480 - 892	62.80	A
Cobalt-57	1.592		A			False Positive Test	2.746	
Cobalt-60	1154	1144	A		0.9	801 - 1487	71.93	A
Iron-55	NR	518				363 - 673		
Manganese-54	830.5	771	A		7.7	540 - 1002	96.27	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	549.7	492	A		11.7	344 - 640	50.28	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	3.415		A			False Positive Test	5.709	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(HPAC99) UKHSA, RCE Glasgow
155 Hardgate Road
Glasgow, Scotland G51 4LS

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.20		A			False Positive Test	0.20	
Cesium-134	655.49	613	A		6.9	429 - 797	45.5135	A
Cesium-137	724.178	686	A		5.6	480 - 892	51.208	A
Cobalt-57	2.0		A			False Positive Test	2.0	
Cobalt-60	1262.172	1144	A		10.3	801 - 1487	88.339	A
Iron-55	NR	518				363 - 673		
Manganese-54	809.353	771	A		5.0	540 - 1002	57.046	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.20	0.48	A	(17)		Sensitivity Evaluation	0.20	
Plutonium-239/240	0.40	0.33	A	(17)		Sensitivity Evaluation	0.40	
Potassium-40	513.079	492	A		4.3	344 - 640	37.744	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	621	737	A		-15.7	516 - 958	25	A
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	33.23	35.9	A		-7.4	25.1 - 46.7	1.90	A
Uranium-238	64.39	68	A		-5.3	48 - 88	3.68	A
Zinc-65	9.6		A			False Positive Test	9.6	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(HPAL01) Los Alamos National Laboratory
Scott Engeman, z277361 MS G761
Los Alamos, NM 87545-1663

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	530.20	613	A		-13.5	429 - 797	18.05	A
Cesium-137	696.2	686	A		1.5	480 - 892	23.66	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1057.8	1144	A		-7.5	801 - 1487	33.21	A
Iron-55	NR	518				363 - 673		
Manganese-54	783.47	771	A		1.6	540 - 1002	26.67	A
Neptunium-237	33.05	18.35	N		80.1	12.85 - 23.86	3.62	A
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	486.60	492	A		-1.1	344 - 640	27.06	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(IAEA99) International Atomic Energy Agency
Agency's Laboratories Seibersdorf
Seibersdorf, Austria A-2444

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR		N	(11)		False Positive Test		
Cesium-134	632	613	A		3.1	429 - 797	17	A
Cesium-137	715	686	A		4.2	480 - 892	19	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1190	1144	A		4.0	801 - 1487	36	A
Iron-55	NR	518				363 - 673		
Manganese-54	803	771	A		4.2	540 - 1002	23	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	502	492	A		2.0	344 - 640	17	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	38.3	35.9	A		6.7	25.1 - 46.7	1.4	A
Uranium-238	72.8	68	A		7.1	48 - 88	2.1	A
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(IDOH01) Indiana Department of Health
550 W 16th St
Indianapolis, IN 46202

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	599	613	A		-2.3	429 - 797	7.16	N
Cesium-137	704	686	A		2.6	480 - 892	19.5	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1220	1144	A		6.6	801 - 1487	21.6	N
Iron-55	NR	518				363 - 673		
Manganese-54	809	771	A		4.9	540 - 1002	18.9	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	501	492	A		1.8	344 - 640	15.3	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(IEMA01) Illinois Emergency Management Agency Radiochemistry Laboratory
1301 Knotts St.
Springfield, IL 62703

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.933		N	(1)		False Positive Test	0.430	
Cesium-134	611	613	A		-0.3	429 - 797	5.1	N
Cesium-137	707	686	A		3.1	480 - 892	10.3	N
Cobalt-57	0.606		A			False Positive Test	0.847	
Cobalt-60	1190	1144	A		4.0	801 - 1487	11.6	N
Iron-55	NR	518				363 - 673		
Manganese-54	785	771	A		1.8	540 - 1002	10.1	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.4161	0.48	A	(17)		Sensitivity Evaluation	0.2888	
Plutonium-239/240	0.4895	0.33	A	(17)		Sensitivity Evaluation	0.1963	
Potassium-40	533	492	A		8.3	344 - 640	15.3	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	712	737	A		-3.4	516 - 958	24.5	A
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	36.86	35.9	A		2.7	25.1 - 46.7	2.07	A
Uranium-238	64.47	68	A		-5.2	48 - 88	3.01	A
Zinc-65	3.61		A			False Positive Test	2.91	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(ISUE01) ISU Environmental Monitoring Laboratory
785 5th 8th Ave Rm B107
Pocatello, Idaho 83209

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	523	613	A		-14.7	429 - 797	13	A
Cesium-137	695	686	A		1.3	480 - 892	42	A
Cobalt-57	0.8		A			False Positive Test	0.5	
Cobalt-60	1098	1144	A		-4.0	801 - 1487	31	A
Iron-55	NR	518				363 - 673		
Manganese-54	782	771	A		1.4	540 - 1002	40	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	553	492	A		12.4	344 - 640	27	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	-2.3		A			False Positive Test	2.4	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(JLNN01) Jefferson Laboratory
111 Hadron Drive
Newport News, VA 23606

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.05		A			False Positive Test	.749	
Cesium-134	599.5	613	A		-2.2	429 - 797	9.72	N
Cesium-137	749.5	686	A		9.3	480 - 892	11.6	N
Cobalt-57	1.655		N	(1)		False Positive Test	.197	
Cobalt-60	1225	1144	A		7.1	801 - 1487	17.4	N
Iron-55	NR	518				363 - 673		
Manganese-54	845.4	771	A		9.7	540 - 1002	11.1	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	541	492	A		10.0	344 - 640	14	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	4.34		A			False Positive Test	2.6	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(JNRC99) Energy and Mineral Regulatory Commission
Radiological laboratories directorate
Amman, Amman 11821

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	511	613	A		-16.6	429 - 797	2	N
Cesium-137	680	686	A		-0.9	480 - 892	5	N
Cobalt-57	1		N	(1)		False Positive Test	0.3	
Cobalt-60	965	1144	A		-15.6	801 - 1487	5	N
Iron-55	NR	518				363 - 673		
Manganese-54	752	771	A		-2.5	540 - 1002	5	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	467	492	A		-5.1	344 - 640	7	N

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	51	68	W		-25.0	48 - 88	6	A
Zinc-65	1		N	(1)		False Positive Test	0.3	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(LOCK03) Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory
INL/Battelle Energy Alliance, LLC
Idaho Falls, ID 83415-7111

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	686.25	613	A		11.9	429 - 797	10.44	N
Cesium-137	796.5	686	A		16.1	480 - 892	12.54	N
Cobalt-57	1.09		A			False Positive Test	1.69	
Cobalt-60	1295	1144	A		13.2	801 - 1487	19.4	N
Iron-55	NR	518				363 - 673		
Manganese-54	882.5	771	A		14.5	540 - 1002	13.96	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	518	492	A		5.3	344 - 640	21.68	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	4.52		A			False Positive Test	5.34	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(MART01) Southern Ohio Cleanup Company LLC
COC, Bldg. X-705, Rm 106
Piketon, OH 45661

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	0.01516	0.0244	N		-37.9	0.0171 - 0.0317	0.00156	A
Uranium-238	4.3456	5.50	W		-21.0	3.85 - 7.15	0.4476	A
Uranium-Total	4.3683	5.53	W		-21.0	3.87 - 7.19	0.449	A
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.00750		A			False Positive Test	0.339	
Cesium-134	NR	613				429 - 797		
Cesium-137	NR	686				480 - 892		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	1144				801 - 1487		
Iron-55	NR	518				363 - 673		
Manganese-54	NR	771				540 - 1002		
Neptunium-237	17.76	18.35	A		-3.2	12.85 - 23.86	1.161	A
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.1448	0.48	A	(17)		Sensitivity Evaluation	0.1048	
Plutonium-239/240	0.3128	0.33	A	(17)		Sensitivity Evaluation	0.1494	
Potassium-40	NR	492				344 - 640		

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	328	370	A		-11.4	259 - 481	6.39	N
Thorium-228	43.9	41.7	A		5.3	29.2 - 54.2	2.718	A
Thorium-230	45.7	45.6	A		0.2	31.9 - 59.3	2.800	A
Thorium-232	39.9	38.7	A		3.1	27.1 - 50.3	2.507	A
Uranium-234	28.77	35.9	A		-19.9	25.1 - 46.7	1.736	A
Uranium-238	53.19	68	W		-21.8	48 - 88	2.837	A
Zinc-65	NR					False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(MART03) Radioactive Material Analysis Laboratory
ORNL
Oak Ridge, TN 37830

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	4.51	4.66	A		-3.2	3.26 - 6.06	0.45	A
Arsenic	7.10	7.4	A		-4.1	5.2 - 9.6	0.71	A
Barium	123	129	A		-4.7	90 - 168	12	A
Beryllium	2.18	2.29	A		-4.8	1.60 - 2.98	0.22	A
Cadmium	0.663	0.724	A		-8.4	0.507 - 0.941	0.066	A
Chromium	12.5	11.9	A		5.0	8.3 - 15.5	1.3	A
Cobalt	5.80	5.72	A		1.4	4.00 - 7.44	0.58	A
Copper	14.3	14.4	A		-0.7	10.1 - 18.7	1.4	A
Lead	11.3	10.7	A		5.6	7.5 - 13.9	1.1	A
Mercury	0.0587	0.0625	A		-6.1	0.0438 - 0.0813	0.0059	A
Nickel	11.7	11.8	A		-0.8	8.3 - 15.3	1.2	A
Selenium	1.45	1.68	A		-13.7	1.18 - 2.18	0.29	W
Silver	2.30	2.48	A		-7.3	1.74 - 3.22	0.23	A
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	1.14	1.10	A		3.6	0.77 - 1.43	0.11	A
Uranium-235	0.0267	0.0244	A		9.4	0.0171 - 0.0317	0.0027	A
Uranium-238	5.85	5.50	A		6.4	3.85 - 7.15	0.58	A
Uranium-Total	5.87	5.53	A		6.1	3.87 - 7.19	0.59	A
Vanadium	30.9	35.5	A		-13.0	24.9 - 46.2	3.1	A
Zinc	51.5	49	A		5.1	34 - 64	5.2	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	7.50	613	N		-98.8	429 - 797	0.13	N
Cesium-137	706	686	A		2.9	480 - 892	10	N
Cobalt-57	2.5		A			False Positive Test	2.5	
Cobalt-60	1180	1144	A		3.1	801 - 1487	13	N
Iron-55	NR	518				363 - 673		
Manganese-54	738	771	A		-4.3	540 - 1002	10	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	488	492	A		-0.8	344 - 640	17	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	16		A			False Positive Test	16	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(NARL01) National Analytical Radiation Environmental Laboratory
540 S. Morris Ave.
Montgomery, AL 36115-2601

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.415		A			False Positive Test	.259	
Cesium-134	629	613	A		2.6	429 - 797	34.4	A
Cesium-137	712	686	A		3.8	480 - 892	39.0	A
Cobalt-57	-4.03		A			False Positive Test	4.32	
Cobalt-60	1150	1144	A		0.5	801 - 1487	61.8	A
Iron-55	NR	518				363 - 673		
Manganese-54	806	771	A		4.5	540 - 1002	44.2	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	528	492	A		7.3	344 - 640	30.1	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	40.2	41.7	A		-3.6	29.2 - 54.2	2.8	A
Thorium-230	48.8	45.6	A		7.0	31.9 - 59.3	3.3	A
Thorium-232	42.9	38.7	A		10.9	27.1 - 50.3	2.93	A
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	-3.91		A			False Positive Test	2.55	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(NESI01) BWXT-Radioisotope & Analytical Chemistry Laboratory
Lynchburg Technology Center
Lynchburg, VA 24504-5447

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	4.98	4.66	A		6.9	3.26 - 6.06	0.388	A
Arsenic	7.06	7.4	A		-4.6	5.2 - 9.6	0.23	A
Barium	118	129	A		-8.5	90 - 168	0.654	N
Beryllium	2.16	2.29	A		-5.7	1.60 - 2.98	0.012	N
Cadmium	0.651	0.724	A		-10.1	0.507 - 0.941	0.004	N
Chromium	14.3	11.9	W		20.2	8.3 - 15.5	0.081	N
Cobalt	2.87	5.72	N		-49.8	4.00 - 7.44	0.017	N
Copper	15.5	14.4	A		7.6	10.1 - 18.7	0.088	N
Lead	8.03	10.7	W		-25.0	7.5 - 13.9	0.043	N
Mercury	0.053	0.0625	A		-15.2	0.0438 - 0.0813	0.004	A
Nickel	6.38	11.8	N		-45.9	8.3 - 15.3	0.037	N
Selenium	2.02	1.68	W		20.2	1.18 - 2.18	0.066	A
Silver	2.29	2.48	A		-7.7	1.74 - 3.22	0.013	N
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	0.846	1.10	W		-23.1	0.77 - 1.43	0.005	N
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	34.8	35.5	A		-2.0	24.9 - 46.2	0.195	N
Zinc	50.2	49	A		2.4	34 - 64	0.288	N

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	4.66		A			False Positive Test	4.01	
Cesium-134	549	613	A		-10.4	429 - 797	23.8	A
Cesium-137	680	686	A		-0.9	480 - 892	28.5	A
Cobalt-57	1.56		A			False Positive Test	0.649	
Cobalt-60	1158	1144	A		1.2	801 - 1487	49.3	A
Iron-55	146	518	N		-71.8	363 - 673	96.1	N
Manganese-54	768	771	A		-0.4	540 - 1002	41.3	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	1313	1474	A		-10.9	1032 - 1916	123	A
Plutonium-238	7.25	0.48	A	(17)		Sensitivity Evaluation	8.28	
Plutonium-239/240	2.29	0.33	A	(17)		Sensitivity Evaluation	2.08	
Potassium-40	503	492	A		2.2	344 - 640	29.0	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	695	737	A		-5.7	516 - 958	55.0	A
Technetium-99	358	370	A		-3.2	259 - 481	29.4	A
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	51.3	35.9	N		42.9	25.1 - 46.7	8.34	W
Uranium-238	80.9	68	A		19.0	48 - 88	9.66	A
Zinc-65	4.11		A			False Positive Test	3.42	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(NJDH01) New Jersey Dept. of Health, ECLS
3 Schwarzkopf Drive
Ewing, NJ 08628

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	653	613	A		6.5	429 - 797	39.4	A
Cesium-137	762	686	A		11.1	480 - 892	45.8	A
Cobalt-57	1.1		A			False Positive Test	2.9	
Cobalt-60	1250	1144	A		9.3	801 - 1487	49.2	A
Iron-55	NR	518				363 - 673		
Manganese-54	848	771	A		10.0	540 - 1002	50.9	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	520	492	A		5.7	344 - 640	22.1	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	0.817		A			False Positive Test	1.22	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(NOCS99) National Oceanography Centre, Southampton
GAU-Radioanalytical
Southampton, Hampshire SO14 3ZH

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	0.11	5.98	N	(5)	-98.2	4.19 - 7.77	0.01	A
Arsenic	6.3	7.4	A	(5)	-14.9	5.2 - 9.6	0.4	A
Barium	560	522	A	(5)	7.3	365 - 679	40	A
Beryllium	2.8	3.26	A	(5)	-14.1	2.28 - 4.24	0.3	A
Cadmium	0.52	0.76	N	(5)	-31.6	0.532 - 0.988	0.06	A
Chromium	32	30.1	A	(5)	6.3	21.1 - 39.1	4	A
Cobalt	6.6	7.1	A	(5)	-7.0	4.97 - 9.23	0.6	A
Copper	24	21.4	A	(5)	12.2	15.0 - 27.8	3	A
Lead	14	14.8	A	(5)	-5.4	10.4 - 19.2	1	A
Mercury	0.077	0.0625	W		23.2	0.0438 - 0.0813	0.004	A
Nickel	15	14.1	A	(5)	6.4	9.9 - 18.3	1	A
Selenium	0.53	1.72	N	(5)	-69.2	1.20 - 2.24	0.07	A
Silver	0.93	2.67	N	(5)	-65.2	1.87 - 3.47	0.09	A
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	1.1	1.44	W	(5)	-23.6	1.01 - 1.87	0.1	A
Uranium-235	0.024	0.0244	A		-1.6	0.0171 - 0.0317	0.002	A
Uranium-238	5.3	5.50	A		-3.6	3.85 - 7.15	0.3	A
Uranium-Total	5.3	5.53	A		-4.2	3.87 - 7.19	0.3	A
Vanadium	70	64	A	(5)	9.4	44.8 - 83.2	5	A
Zinc	230	77	N	(5)	198.7	54 - 100	30	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	2.4		N	(1)		False Positive Test	0.3	
Cesium-134	640	613	A		4.4	429 - 797	20	A
Cesium-137	660	686	A		-3.8	480 - 892	20	A
Cobalt-57	1.3		N	(1)		False Positive Test	0.3	
Cobalt-60	1110	1144	A		-3.0	801 - 1487	30	A
Iron-55	706	518	N		36.3	363 - 673	38	A
Manganese-54	710	771	A		-7.9	540 - 1002	20	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	1317	1474	A		-10.7	1032 - 1916	66	A
Plutonium-238	0.3	0.48	A	(17)		Sensitivity Evaluation	3	
Plutonium-239/240	0.8	0.33	A			Sensitivity Evaluation	0.2	
Potassium-40	440	492	A		-10.6	344 - 640	20	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	713	737	A		-3.3	516 - 958	50	A
Technetium-99	320	370	A		-13.5	259 - 481	10	A
Thorium-228	50	41.7	A		19.9	29.2 - 54.2	3	A
Thorium-230	45	45.6	A		-1.3	31.9 - 59.3	3	A
Thorium-232	41	38.7	A		5.9	27.1 - 50.3	2	A
Uranium-234	35	35.9	A		-2.5	25.1 - 46.7	2	A
Uranium-238	61	68	A		-10.3	48 - 88	3	A
Zinc-65	10		A			False Positive Test	100	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(ODHL01) Ohio Department of Health Laboratory
8995 E Main Street
Reynoldsburg, OH 43068

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	671	613	A		9.5	429 - 797	19.2	A
Cesium-137	743	686	A		8.3	480 - 892	44.7	A
Cobalt-57	1.30		A			False Positive Test	0.670	
Cobalt-60	1220	1144	A		6.6	801 - 1487	34.5	A
Iron-55	NR	518				363 - 673		
Manganese-54	819	771	A		6.2	540 - 1002	49.2	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	497	492	A		1.0	344 - 640	22.5	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	3.31		A			False Positive Test	1.22	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(OTLI01) Pace Analytical National Center for Testing & Innovation
12065 Lebanon Road
Mt. Juliet, TN 37122

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	3.48	4.66	W		-25.3	3.26 - 6.06	0.5	A
Arsenic	6.82	7.4	A		-7.8	5.2 - 9.6	0.2	A
Barium	134	129	A		3.9	90 - 168	0.5	N
Beryllium	2.24	2.29	A		-2.2	1.60 - 2.98	0.5	W
Cadmium	0.73	0.724	A		0.8	0.507 - 0.941	0.2	W
Chromium	16.9	11.9	N		42.0	8.3 - 15.5	1	A
Cobalt	6.76	5.72	A		18.2	4.00 - 7.44	0.2	A
Copper	18.3	14.4	W		27.1	10.1 - 18.7	1	A
Lead	11.5	10.7	A		7.5	7.5 - 13.9	0.4	A
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	13.7	11.8	A		16.1	8.3 - 15.3	0.5	A
Selenium	2.11	1.68	W		25.6	1.18 - 2.18	0.5	W
Silver	2.54	2.48	A		2.4	1.74 - 3.22	0.1	A
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	1.09	1.10	A		-0.9	0.77 - 1.43	0.4	N
Uranium-235	.008	0.0244	N		-67.2	0.0171 - 0.0317	.001	A
Uranium-238	3.49	5.50	N		-36.5	3.85 - 7.15	.001	N
Uranium-Total	3.49	5.53	N		-36.9	3.87 - 7.19	.01	N
Vanadium	39.1	35.5	A		10.1	24.9 - 46.2	0.5	N
Zinc	62	49	W		26.5	34 - 64	0.5	N

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.8		A			False Positive Test	1.47	
Cesium-134	586	613	A		-4.4	429 - 797	36.5	A
Cesium-137	735	686	A		7.1	480 - 892	46.2	A
Cobalt-57	-.004		A			False Positive Test	1.96	
Cobalt-60	1120	1144	A		-2.1	801 - 1487	74.6	A
Iron-55	NR	518				363 - 673		
Manganese-54	843	771	A		9.3	540 - 1002	52.8	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	1419	1474	A		-3.7	1032 - 1916	66.2	A
Plutonium-238	1.14	0.48	A	(17)		Sensitivity Evaluation	1.42	
Plutonium-239/240	0.43	0.33	A	(17)		Sensitivity Evaluation	0.95	
Potassium-40	536	492	A		8.9	344 - 640	47.6	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	606	737	A		-17.8	516 - 958	17.1	A
Technetium-99	281	370	W		-24.1	259 - 481	35.5	A
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	38.8	35.9	A		8.1	25.1 - 46.7	7.6	W
Uranium-238	58.6	68	A		-13.8	48 - 88	9.2	W
Zinc-65	15.1		A			False Positive Test	10.7	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

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Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

MAPEP Mixed Analyte Performance Evaluation Program

Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-MaS53

(RJLG01) RJ Lee Group - Columbia Basin Analytical Laboratories (CBAL)
2710 North 20th Avenue
Pasco, WA 99301

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	4.99	4.66	A		7.1	3.26 - 6.06	0.470	A
Arsenic	7.05	7.4	A		-4.7	5.2 - 9.6	0.326	A
Barium	129	129	A		0.0	90 - 168	4.00	A
Beryllium	2.34	2.29	A		2.2	1.60 - 2.98	0.140	A
Cadmium	0.823	0.724	A		13.7	0.507 - 0.941	0.037	A
Chromium	12.5	11.9	A		5.0	8.3 - 15.5	0.450	A
Cobalt	6.11	5.72	A		6.8	4.00 - 7.44	0.400	A
Copper	14.2	14.4	A		-1.4	10.1 - 18.7	0.900	A
Lead	12.5	10.7	A		16.8	7.5 - 13.9	0.490	A
Mercury	0.098	0.0625	N		56.8	0.0438 - 0.0813	0.009	A
Nickel	12.2	11.8	A		3.4	8.3 - 15.3	0.640	A
Selenium	1.81	1.68	A		7.7	1.18 - 2.18	0.182	A
Silver	2.52	2.48	A		1.6	1.74 - 3.22	0.093	A
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	1.11	1.10	A		0.9	0.77 - 1.43	0.210	W
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	3.71	5.53	N		-32.9	3.87 - 7.19	0.217	A
Vanadium	30.1	35.5	A		-15.2	24.9 - 46.2	1.20	A
Zinc	56.5	49	A		15.3	34 - 64	9.80	W

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR	613				429 - 797		
Cesium-137	NR	686				480 - 892		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	1144				801 - 1487		
Iron-55	NR	518				363 - 673		
Manganese-54	NR	771				540 - 1002		
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	NR	492				344 - 640		

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(RPSC01) Radiation Protection Service
O. Ministry of Labour, Immigration, Training & Skills Developmen
Mississauga, Ontario L4V 1W8

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	517	613	A		-15.7	429 - 797	7.93	N
Cesium-137	587	686	A		-14.4	480 - 892	21.8	A
Cobalt-57	1.82		N	(1)		False Positive Test	0.566	
Cobalt-60	974	1144	A		-14.9	801 - 1487	21.5	A
Iron-55	NR	518				363 - 673		
Manganese-54	654	771	A		-15.2	540 - 1002	20.2	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	399	492	A		-18.9	344 - 640	14.8	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	4.64		A			False Positive Test	6.68	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(SEML01) SRS Environmental Monitoring Laboratory
Bldg 735-B
Aiken, SC 29808

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.17		A			False Positive Test	0.27	
Cesium-134	613	613	A		0.0	429 - 797	44	A
Cesium-137	698	686	A		1.7	480 - 892	68	A
Cobalt-57	-1.0		A			False Positive Test	1.6	
Cobalt-60	1155	1144	A		1.0	801 - 1487	91	A
Iron-55	NR	518				363 - 673		
Manganese-54	805	771	A		4.4	540 - 1002	83	A
Neptunium-237	21.2	18.35	A		15.5	12.85 - 23.86	1.8	A
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.29	0.48	A	(17)		Sensitivity Evaluation	0.20	
Plutonium-239/240	0.41	0.33	A	(17)		Sensitivity Evaluation	0.23	
Potassium-40	537	492	A		9.1	344 - 640	52	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	711	737	A		-3.5	516 - 958	38	A
Technetium-99	NR	370				259 - 481		
Thorium-228	49.7	41.7	A		19.2	29.2 - 54.2	2.6	A
Thorium-230	49.1	45.6	A		7.7	31.9 - 59.3	2.7	A
Thorium-232	42.9	38.7	A		10.9	27.1 - 50.3	2.5	A
Uranium-234	40.8	35.9	A		13.6	25.1 - 46.7	2.9	A
Uranium-238	71.5	68	A		5.1	48 - 88	4.4	A
Zinc-65	1.3		A			False Positive Test	5.0	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(SLAC01) SLAC DOE National Accelerator Laboratory
2575 Sand Hill Road
Menlo Park, CA 94025

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	596.45	613	A		-2.7	429 - 797	59.64	A
Cesium-137	716.95	686	A		4.5	480 - 892	71.70	A
Cobalt-57	1.49		A			False Positive Test	1.49	
Cobalt-60	1113.33	1144	A		-2.7	801 - 1487	111.33	A
Iron-55	NR	518				363 - 673		
Manganese-54	783.28	771	A		1.6	540 - 1002	78.33	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	494.51	492	A		0.5	344 - 640	49.45	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	3.48		A			False Positive Test	3.48	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(SLDA01) USACE SLDA FUSRAP Project
2992 River Road
Vandergrift, PA 15690

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	4.51E-04	5.9E-4	W		-23.6	4.13E-4 - 7.67E-4	2.27E-05	A
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	0.0494	0.0244	N		102.5	0.0171 - 0.0317	0.0028	A
Uranium-238	4.6780	5.50	A		-14.9	3.85 - 7.15	0.0889	N
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	3.98		A			False Positive Test	1.77	
Cesium-134	571.64	613	A		-6.7	429 - 797	5.831	N
Cesium-137	742.67	686	A		8.3	480 - 892	10.384	N
Cobalt-57	2.33		A			False Positive Test	0.8981	
Cobalt-60	1204.3	1144	A		5.3	801 - 1487	12.174	N
Iron-55	NR	518				363 - 673		
Manganese-54	841.91	771	A		9.2	540 - 1002	10.6205	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	3.71	0.48	A	(17)		Sensitivity Evaluation	3.25	
Plutonium-239/240	3.49	0.33	A	(17)		Sensitivity Evaluation	1.55	
Potassium-40	533.39	492	A		8.4	344 - 640	14.6055	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	528.730	737	W		-28.3	516 - 958	6.660	N
Technetium-99	286.06	370	W		-22.7	259 - 481	14.46	A
Thorium-228	45.45	41.7	A		9.0	29.2 - 54.2	7.91	W
Thorium-230	57.49	45.6	W		26.1	31.9 - 59.3	45.45	N
Thorium-232	38.96	38.7	A		0.7	27.1 - 50.3	7.09	W
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	-10.974		A			False Positive Test	3.8048	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(SOUT01) Southwest Research Institute
6220 Culebra Rd.
San Antonio, TX 78238-5166

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	0.0185	0.0244	W		-24.2	0.0171 - 0.0317	0.00621	N
Uranium-238	4.72	5.50	A		-14.2	3.85 - 7.15	0.756	W
Uranium-Total	4.74	5.53	A		-14.3	3.87 - 7.19	0.760	W
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.210		A			False Positive Test	0.470	
Cesium-134	585	613	A		-4.6	429 - 797	10.6	N
Cesium-137	722	686	A		5.2	480 - 892	12.9	N
Cobalt-57	1.63		N	(1)		False Positive Test	0.364	
Cobalt-60	1222	1144	A		6.8	801 - 1487	24.1	N
Iron-55	349	518	N		-32.6	363 - 673	52.1	A
Manganese-54	833	771	A		8.0	540 - 1002	14.5	N
Neptunium-237	20.1	18.35	A		9.5	12.85 - 23.86	1.67	A
Nickel-63	NR	1474	N	(28)		1032 - 1916		
Plutonium-238	0.001	0.48	A	(17)		Sensitivity Evaluation	0.171	
Plutonium-239/240	0.363	0.33	A	(17)		Sensitivity Evaluation	0.272	
Potassium-40	556	492	A		13.0	344 - 640	19.7	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	715	737	A		-3.0	516 - 958	56.7	A
Technetium-99	NR	370	N	(28)		259 - 481		
Thorium-228	45.9	41.7	A		10.1	29.2 - 54.2	4.63	A
Thorium-230	45.2	45.6	A		-0.9	31.9 - 59.3	4.59	A
Thorium-232	37.8	38.7	A		-2.3	27.1 - 50.3	3.93	A
Uranium-234	33.9	35.9	A		-5.6	25.1 - 46.7	3.13	A
Uranium-238	69.6	68	A		2.4	48 - 88	5.74	A
Zinc-65	-8.26		A			False Positive Test	7.59	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(SRPD01) Sandia National Laboratories, Radiation Protection Sample Diagnostics
PO Box 5800, MS1103
Albuquerque, NM 87185-1103

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	2.20E+00		A			False Positive Test	4.68	
Cesium-134	6.56E+02	613	A		7.0	429 - 797	4.24	A
Cesium-137	7.39E+02	686	A		7.7	480 - 892	4.45	A
Cobalt-57	-5.75E-01		A			False Positive Test	1.11	
Cobalt-60	1.23E+03	1144	A		7.5	801 - 1487	4.93	A
Iron-55	NR	518				363 - 673		
Manganese-54	8.27E+02	771	A		7.3	540 - 1002	4.98	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	4.94E+02	492	A		0.4	344 - 640	2.31	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	-4.30E-01		A			False Positive Test	4.14	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(STRL01) South Texas Project Radiological Laboratory
12090 FM 521
Wadsworth, Texas 77483

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	595.5	613	A		-2.9	429 - 797	4.87	N
Cesium-137	689.9	686	A		0.6	480 - 892	5.69	N
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1149	1144	A		0.4	801 - 1487	6.1	N
Iron-55	NR	518				363 - 673		
Manganese-54	795.5	771	A		3.2	540 - 1002	10.3	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	1387	492	N		181.9	344 - 640	19.3	N

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

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Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(TDHL01) Texas Department of State Health Services Laboratory
1100 W 49th Street
Austin, TX 78756

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.49		A			False Positive Test	0.78	
Cesium-134	599	613	A		-2.3	429 - 797	11	N
Cesium-137	654	686	A		-4.7	480 - 892	20	A
Cobalt-57	0.9		A			False Positive Test	2.2	
Cobalt-60	1108	1144	A		-3.1	801 - 1487	21	N
Iron-55	NR	518				363 - 673		
Manganese-54	762	771	A		-1.2	540 - 1002	20	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.97	0.48	A	(17)		Sensitivity Evaluation	0.59	
Plutonium-239/240	0.61	0.33	A	(17)		Sensitivity Evaluation	0.48	
Potassium-40	446	492	A		-9.4	344 - 640	30	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	667	737	A		-9.5	516 - 958	17	A
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	28.0	35.9	W		-22.0	25.1 - 46.7	3.2	A
Uranium-238	53.9	68	W		-20.7	48 - 88	5.1	A
Zinc-65	17.0		A			False Positive Test	7.2	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(TELE01) Teledyne Brown Engineering - Environmental Services
2508 Quality Lane
Knoxville, TN 37931-6819

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR	613				429 - 797		
Cesium-137	NR	686				480 - 892		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	1144				801 - 1487		
Iron-55	NR	518				363 - 673		
Manganese-54	NR	771				540 - 1002		
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	862	1474	N		-41.5	1032 - 1916	46.5	A
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	NR	492				344 - 640		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	314	370	A		-15.1	259 - 481	25.8	A
Thorium-228	51.2	41.7	W		22.8	29.2 - 54.2	19.0	N
Thorium-230	54.8	45.6	W		20.2	31.9 - 59.3	19.3	N
Thorium-232	50.4	38.7	N		30.2	27.1 - 50.3	18.0	N
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

MAPEP Mixed Analyte Performance Evaluation Program

Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-MaS53

(TELE02) Microbac Laboratories Inc. - Northbrook
700 Landwehr Road
Northbrook, IL 60062-

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	491	613	A		-19.9	429 - 797	8	N
Cesium-137	721	686	A		5.1	480 - 892	11	N
Cobalt-57	1.23		A			False Positive Test	17.83	
Cobalt-60	1136	1144	A		-0.7	801 - 1487	10	N
Iron-55	NR	518				363 - 673		
Manganese-54	846	771	A		9.7	540 - 1002	13	N
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	580	492	A		17.9	344 - 640	39	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	0.12		A			False Positive Test	6.20	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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Notes:

(1) = False Positive
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(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

MAPEP Mixed Analyte Performance Evaluation Program

Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-MaS53
(TMAO01) EBERLINE Analytical Corporation
601 A SCARBORO RD
OAK RIDGE, TN 37830-

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.142		A			False Positive Test	5.116	
Cesium-134	955.495	613	N		55.9	429 - 797	80.624	A
Cesium-137	1195.410	686	N		74.3	480 - 892	110.107	A
Cobalt-57	-1.214		A			False Positive Test	10.535	
Cobalt-60	1937.306	1144	N		69.3	801 - 1487	117.171	A
Iron-55	NR	518				363 - 673		
Manganese-54	1366.878	771	N		77.3	540 - 1002	226.798	W
Neptunium-237	16.447	18.35	A		-10.4	12.85 - 23.86	6.387	N
Nickel-63	1347.320	1474	A		-8.6	1032 - 1916	81.137	A
Plutonium-238	NR	0.48	N	(18)		Sensitivity Evaluation		
Plutonium-239/240	NR	0.33	N	(18)		Sensitivity Evaluation		
Potassium-40	793.853	492	N		61.4	344 - 640	168.304	W

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	718.864	737	A		-2.5	516 - 958	34.886	A
Technetium-99	335.031	370	A		-9.5	259 - 481	51.072	W
Thorium-228	37.832	41.7	A		-9.3	29.2 - 54.2	8.588	W
Thorium-230	45.727	45.6	A		0.3	31.9 - 59.3	8.893	W
Thorium-232	52.259	38.7	N		35.0	27.1 - 50.3	24.536	N
Uranium-234	20.792	35.9	N		-42.1	25.1 - 46.7	7.199	N
Uranium-238	38.511	68	N		-43.4	48 - 88	10.057	W
Zinc-65	21.343		A			False Positive Test	66.009	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(TNUT01) St. Louis USACE FUSRAP Laboratory
112 James S McDonnell Blvd
HAZELWOOD, MO 63042

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.491		A			False Positive Test	0.585	
Cesium-134	475	613	W		-22.5	429 - 797	5.14	N
Cesium-137	649	686	A		-5.4	480 - 892	16.6	A
Cobalt-57	-1.05		A			False Positive Test	2.61	
Cobalt-60	1060	1144	A		-7.3	801 - 1487	18.2	N
Iron-55	NR	518				363 - 673		
Manganese-54	753	771	A		-2.3	540 - 1002	16.9	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	492	492	A		0.0	344 - 640	13.4	A

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	35.5	41.7	A		-14.9	29.2 - 54.2	6.73	W
Thorium-230	64.5	45.6	N		41.4	31.9 - 59.3	9.12	A
Thorium-232	36.0	38.7	A		-7.0	27.1 - 50.3	6.44	W
Uranium-234	36.2	35.9	A		0.8	25.1 - 46.7	6.13	W
Uranium-238	74.6	68	A		9.7	48 - 88	9.08	A
Zinc-65	-1.99		A			False Positive Test	1.58	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(UNTE01) UniTech-235
178 Aldo Drive
Barnwell, SC 29812

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	610.50	613	A		-0.4	429 - 797	23.41	A
Cesium-137	822.88	686	A		20.0	480 - 892	46.66	A
Cobalt-57	0.1		N	(1)		False Positive Test	0.02	
Cobalt-60	1331.63	1144	A		16.4	801 - 1487	48.95	A
Iron-55	NR	518				363 - 673		
Manganese-54	852.11	771	A		10.5	540 - 1002	41	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	615.45	492	W		25.1	344 - 640	51.62	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	0.2		N	(1)		False Positive Test	0.01	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(WEST04) PACE ANALYTICAL SERVICES, GREENSBURG
1638 Roseytown Road
Greensburg, PA 15601

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	698.800	613	A		14.0	429 - 797	49.410	A
Cesium-137	750.730	686	A		9.4	480 - 892	53.303	A
Cobalt-57	1.801		A			False Positive Test	2.349	
Cobalt-60	1303.700	1144	A		14.0	801 - 1487	86.905	A
Iron-55	NR	518				363 - 673		
Manganese-54	896.960	771	A		16.3	540 - 1002	63.256	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	554.820	492	A		12.8	344 - 640	43.910	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	0.001		A			False Positive Test	3.386	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

MAPEP Mixed Analyte Performance Evaluation Program

Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-MaS53

(WIPH01) WI, DPH, Radiation Protection Section
201 E Washington Ave
Madison, WI 53703

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	5.17		A			False Positive Test	4.25	
Cesium-134	610.74	613	A		-0.4	429 - 797	12.89	A
Cesium-137	687.25	686	A		0.2	480 - 892	41.34	A
Cobalt-57	2.48		N	(1)		False Positive Test	0.77	
Cobalt-60	1130.06	1144	A		-1.2	801 - 1487	32.03	A
Iron-55	NR	518				363 - 673		
Manganese-54	760.64	771	A		-1.3	540 - 1002	38.88	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	459.89	492	A		-6.5	344 - 640	20.13	A

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	1.92		A			False Positive Test	3.28	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(WSHL01) Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive
Madison, WI 53718

Inorganic

Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	NR	0.0244				0.0171 - 0.0317		
Uranium-238	NR	5.50				3.85 - 7.15		
Uranium-Total	NR	5.53				3.87 - 7.19		
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological

Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.7510		A			False Positive Test	0.4680	
Cesium-134	596	613	A		-2.8	429 - 797	11.6	N
Cesium-137	723	686	A		5.4	480 - 892	21.6	A
Cobalt-57	1.36		N	(1)		False Positive Test	0.263	
Cobalt-60	1180	1144	A		3.1	801 - 1487	73.0	A
Iron-55	NR	518				363 - 673		
Manganese-54	805	771	A		4.4	540 - 1002	34.6	A
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	0.3059	0.48	A	(17)		Sensitivity Evaluation	0.5276	
Plutonium-239/240	0.9109	0.33	A	(17)		Sensitivity Evaluation	0.343	
Potassium-40	521	492	A		5.9	344 - 640	46.1	A

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	704.34	737	A		-4.4	516 - 958	16.3	A
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	21.48	35.9	N		-40.2	25.1 - 46.7	2.18	A
Uranium-238	48.98	68	W		-28.0	48 - 88	3.51	A
Zinc-65	-1.81		A			False Positive Test	2.28	

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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A = ACCEPTABLE.....2% <= RP <= 15%

W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

(1) = False Positive
(5) = Total Metal
(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
(17) = NOT DETECTED - reported a statistically zero result
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-25-MaS53
(YPGA01) US Army Yuma Proving Ground / Material Analysis Lab
301 C. Street
Yuma, AZ 85365

Inorganic — Units: (mg/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	4.66				3.26 - 6.06		
Arsenic	NR	7.4				5.2 - 9.6		
Barium	NR	129				90 - 168		
Beryllium	NR	2.29				1.60 - 2.98		
Cadmium	NR	0.724				0.507 - 0.941		
Chromium	NR	11.9				8.3 - 15.5		
Cobalt	NR	5.72				4.00 - 7.44		
Copper	NR	14.4				10.1 - 18.7		
Lead	NR	10.7				7.5 - 13.9		
Mercury	NR	0.0625				0.0438 - 0.0813		
Nickel	NR	11.8				8.3 - 15.3		
Selenium	NR	1.68				1.18 - 2.18		
Silver	NR	2.48				1.74 - 3.22		
Technetium-99	NR	5.9E-4				4.13E-4 - 7.67E-4		
Thallium	NR	1.10				0.77 - 1.43		
Uranium-235	0.018	0.0244	W		-26.2	0.0171 - 0.0317	0.005	W
Uranium-238	4.03	5.50	W		-26.7	3.85 - 7.15	0.5	A
Uranium-Total	4.04	5.53	W		-26.9	3.87 - 7.19	0.5	A
Vanadium	NR	35.5				24.9 - 46.2		
Zinc	NR	49				34 - 64		

Radiological — Units: (Bq/kg)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR	613				429 - 797		
Cesium-137	NR	686				480 - 892		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	1144				801 - 1487		
Iron-55	NR	518				363 - 673		
Manganese-54	NR	771				540 - 1002		
Neptunium-237	NR	18.35				12.85 - 23.86		
Nickel-63	NR	1474				1032 - 1916		
Plutonium-238	NR	0.48				Sensitivity Evaluation		
Plutonium-239/240	NR	0.33				Sensitivity Evaluation		
Potassium-40	NR	492				344 - 640		

Radiological								Units: (Bq/kg)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	737				516 - 958		
Technetium-99	NR	370				259 - 481		
Thorium-228	NR	41.7				29.2 - 54.2		
Thorium-230	NR	45.6				31.9 - 59.3		
Thorium-232	NR	38.7				27.1 - 50.3		
Uranium-234	NR	35.9				25.1 - 46.7		
Uranium-238	NR	68				48 - 88		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: August 1, 2025

Results Flags:

A = Result acceptable..... |Bias| <= 20%

W = Result acceptable with warning..... 20% < |Bias| <= 30%

N = Result not acceptable..... |Bias| > 30%

RW = Report Warning

NR = Not Reported

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Notes:

(1) = False Positive
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(6) = Not Evaluated
(11) = False Positive Test, Result Not Reported
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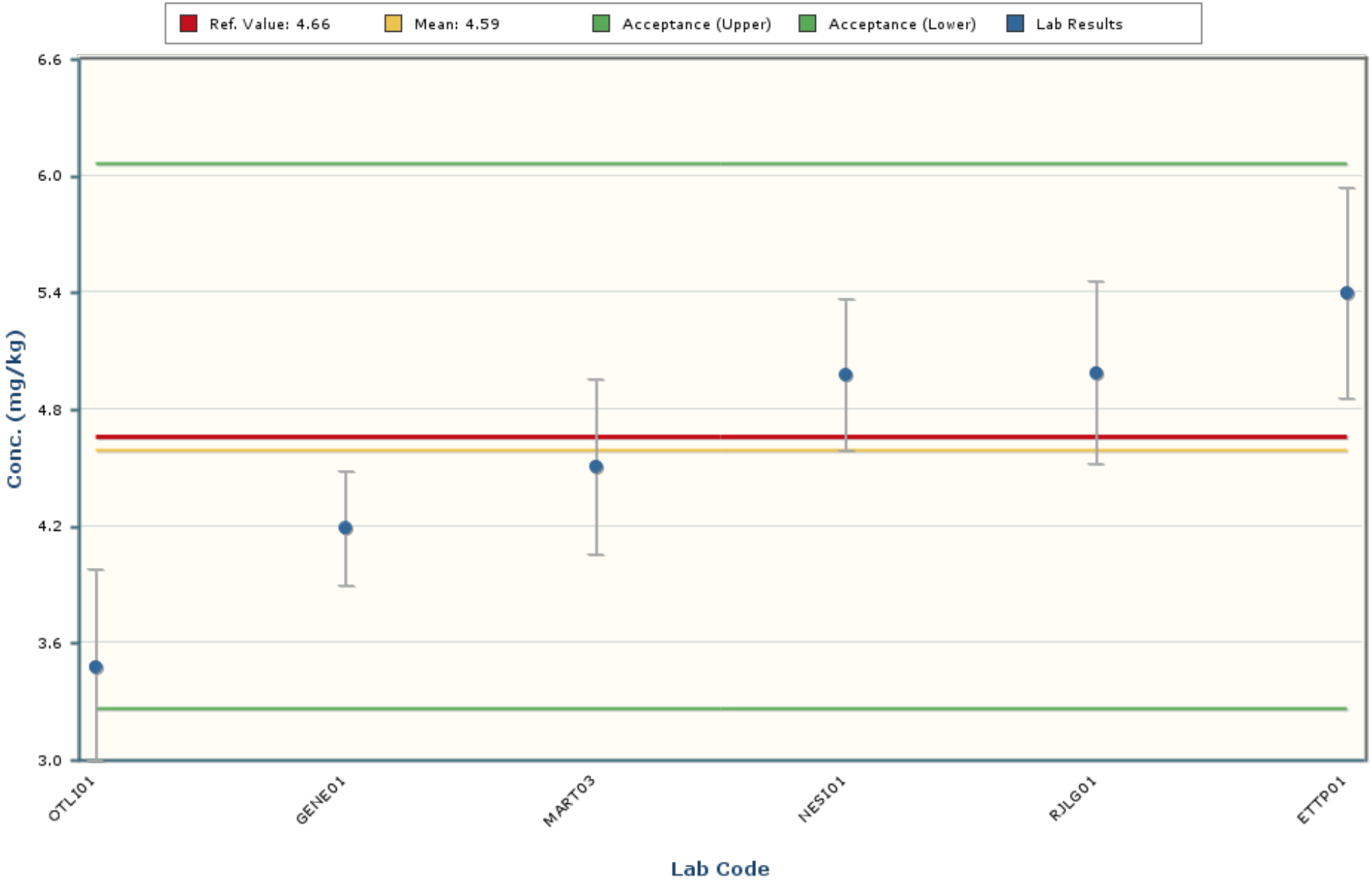
(18) = Sensitivity Evaluation, Value Not Reported
(28) = Not Reporting Previously Reported Analyte
(29) = Statistically significant negative value at 3 standard deviations

Antimony

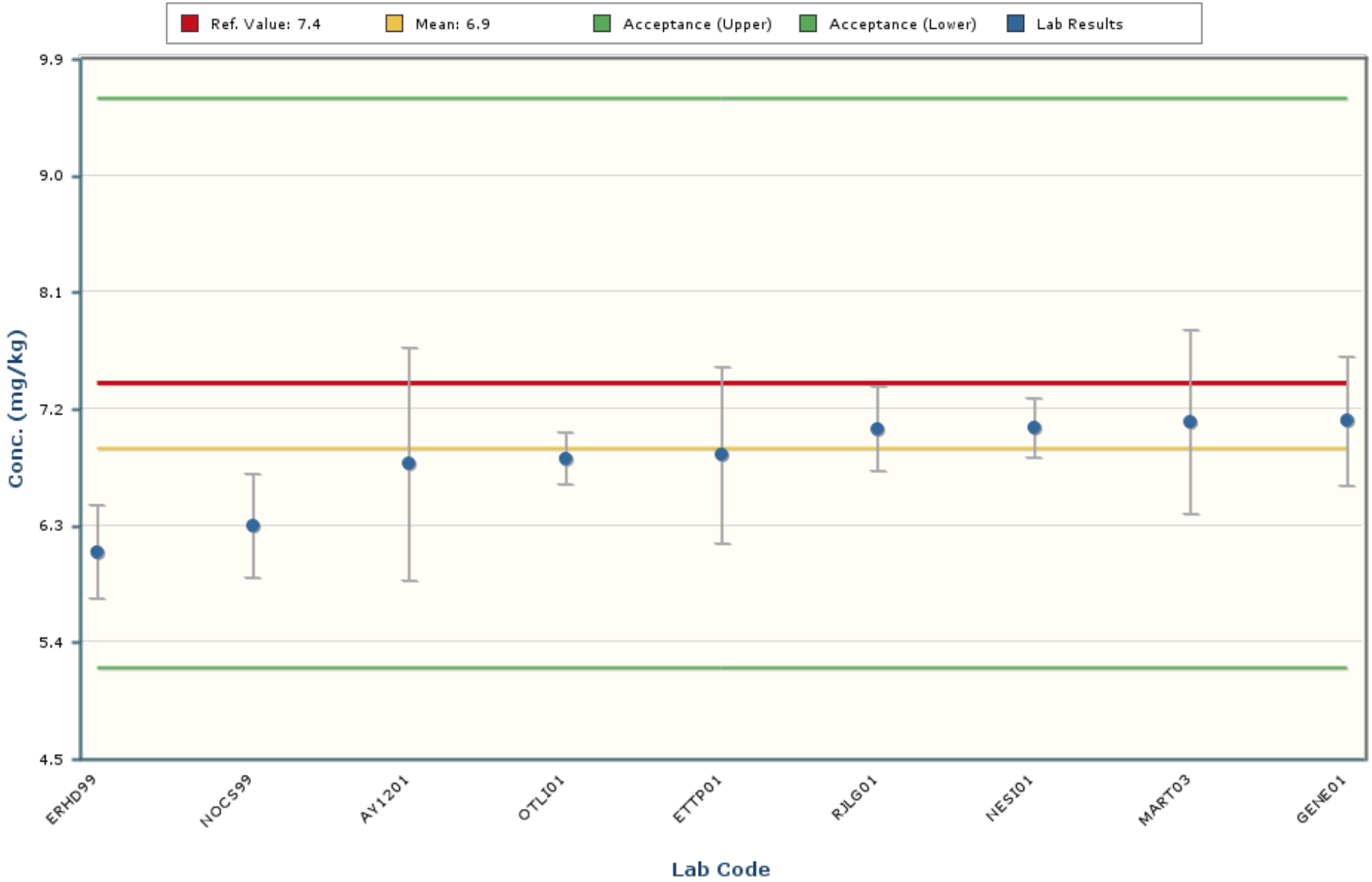
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 1.15 and 8.03 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Arsenic

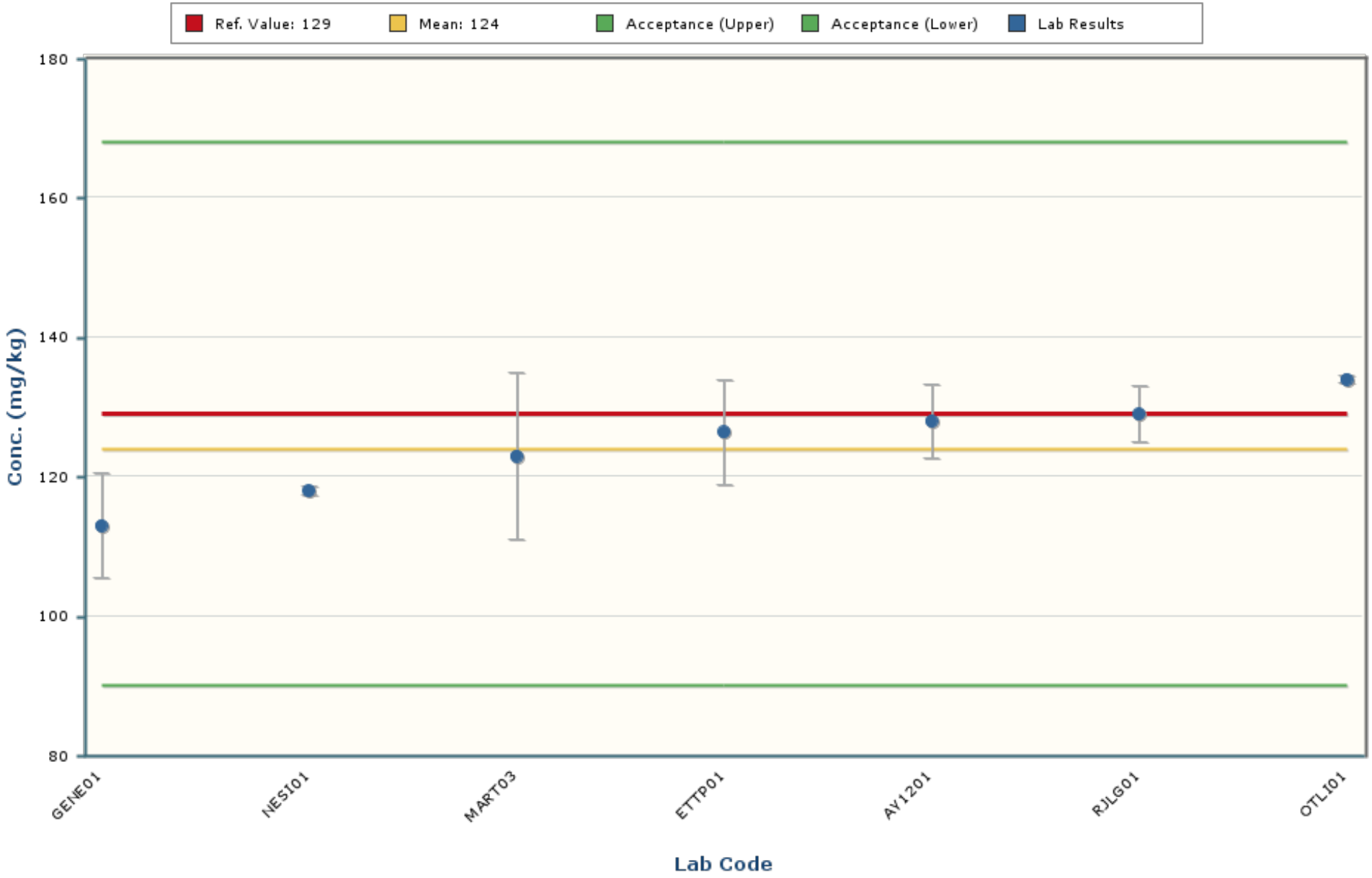
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 5.2 and 8.5 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Barium

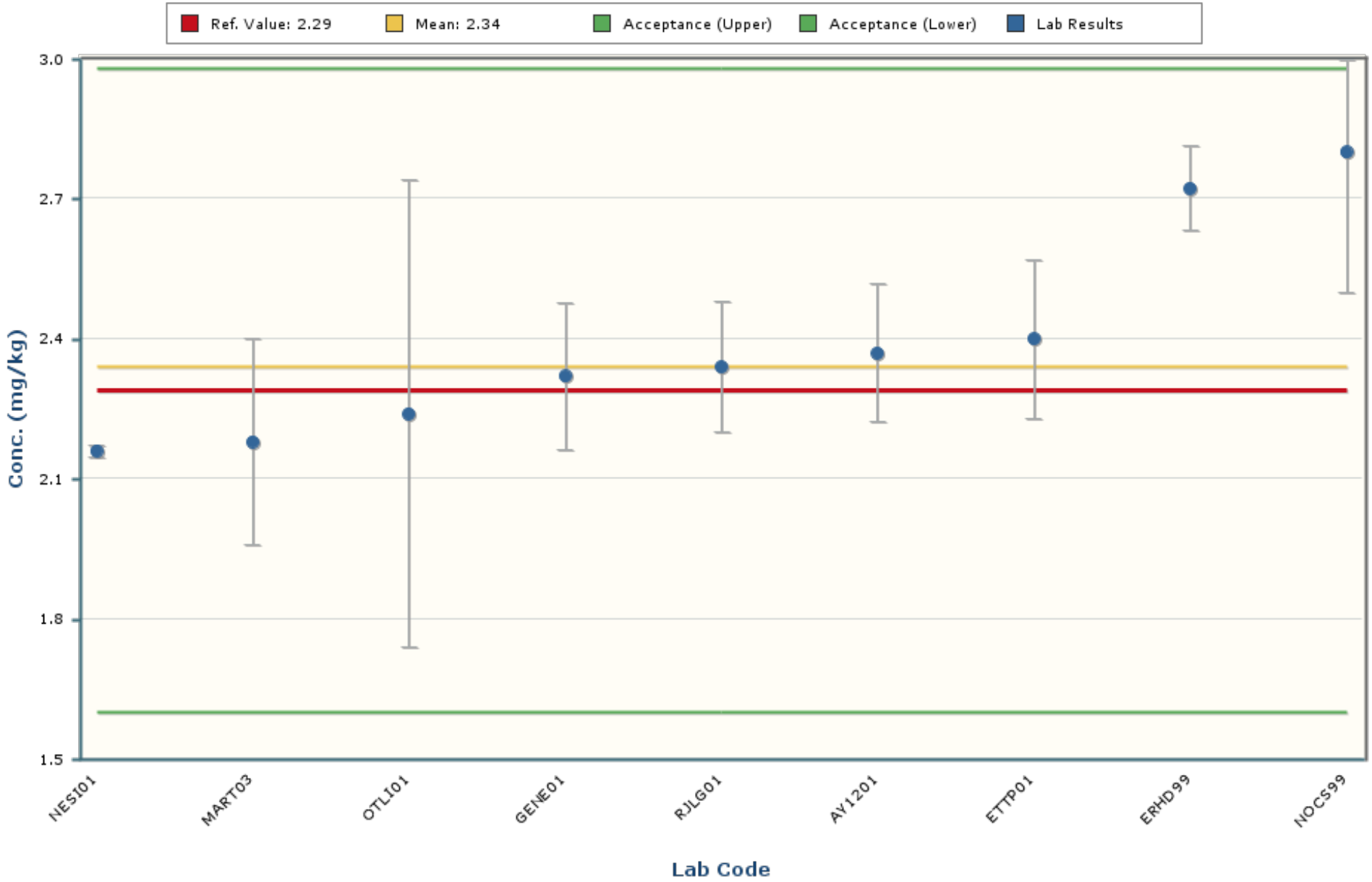
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 89 and 160 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Beryllium

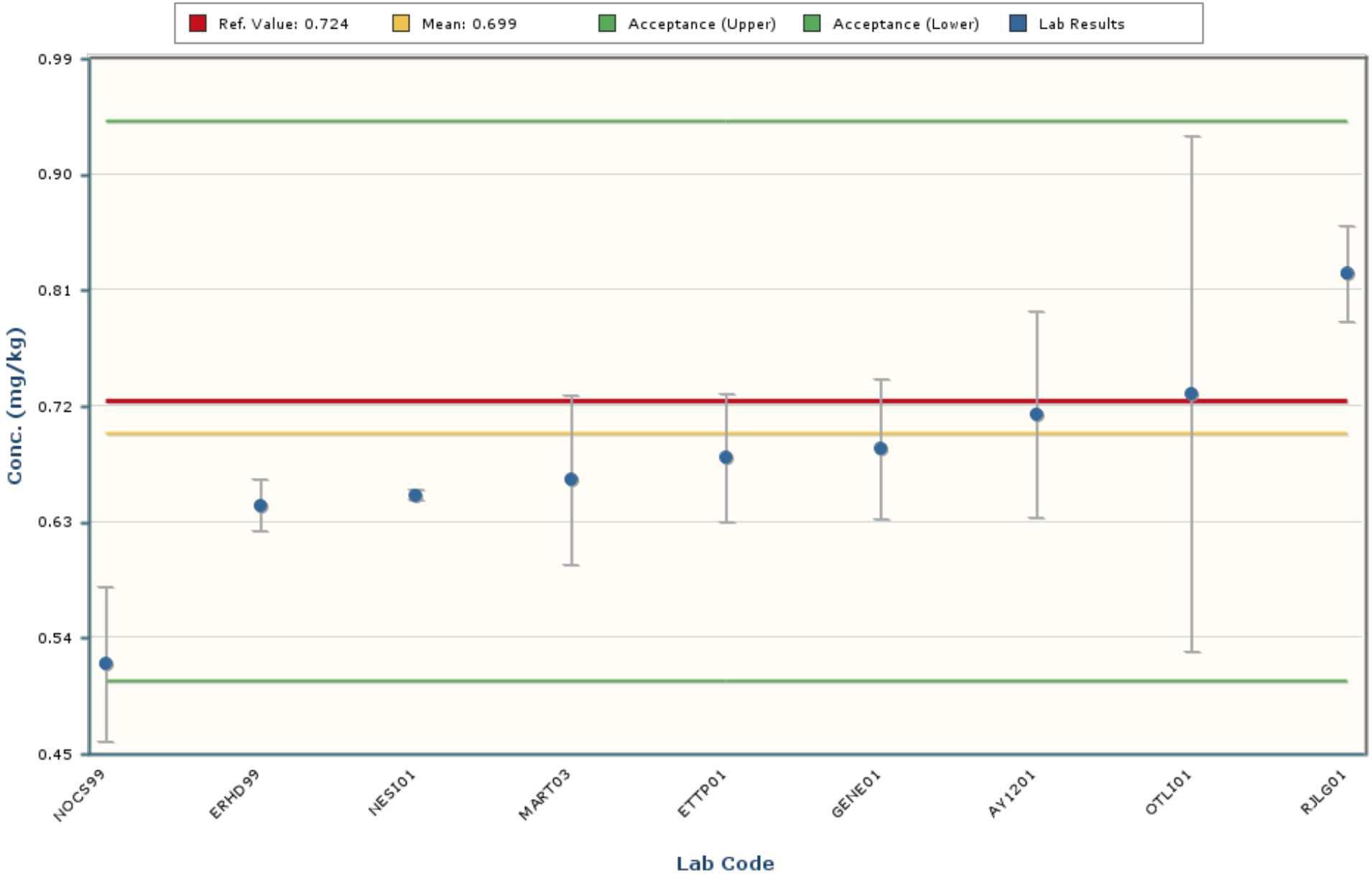
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 1.46 and 3.23 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Cadmium

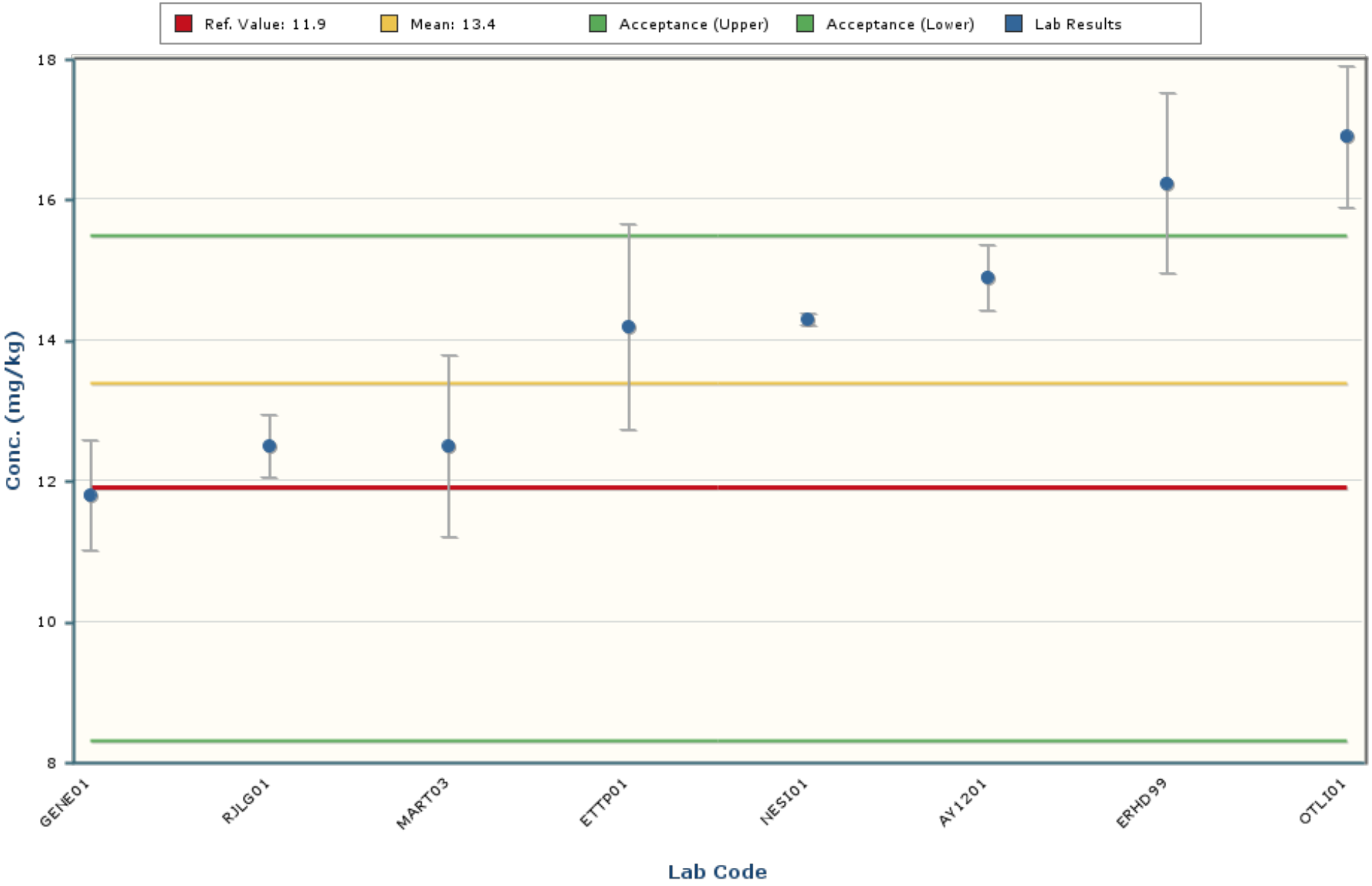
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 0.407 and 0.990 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Chromium

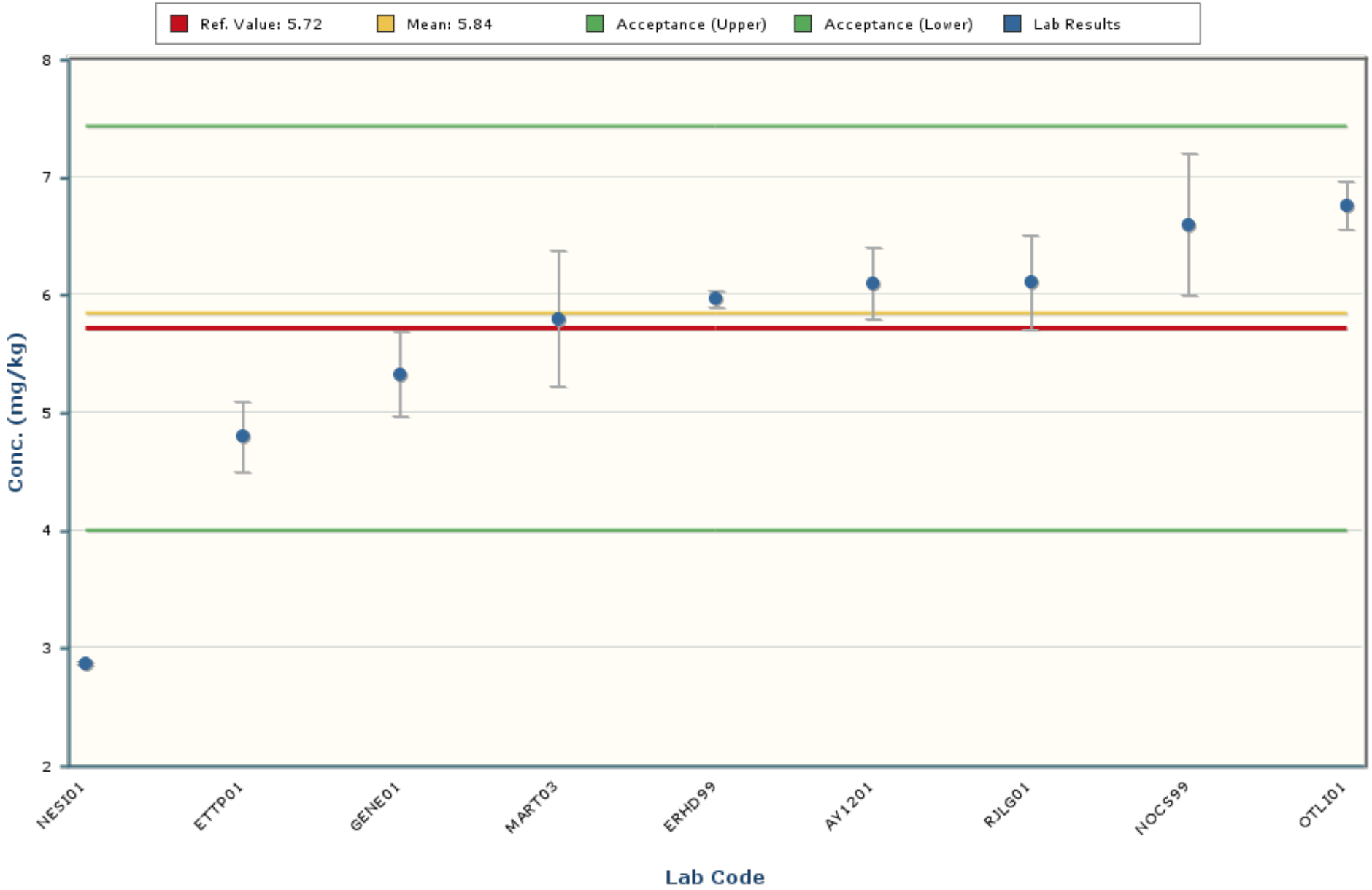
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 7.1 and 19.6 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Cobalt

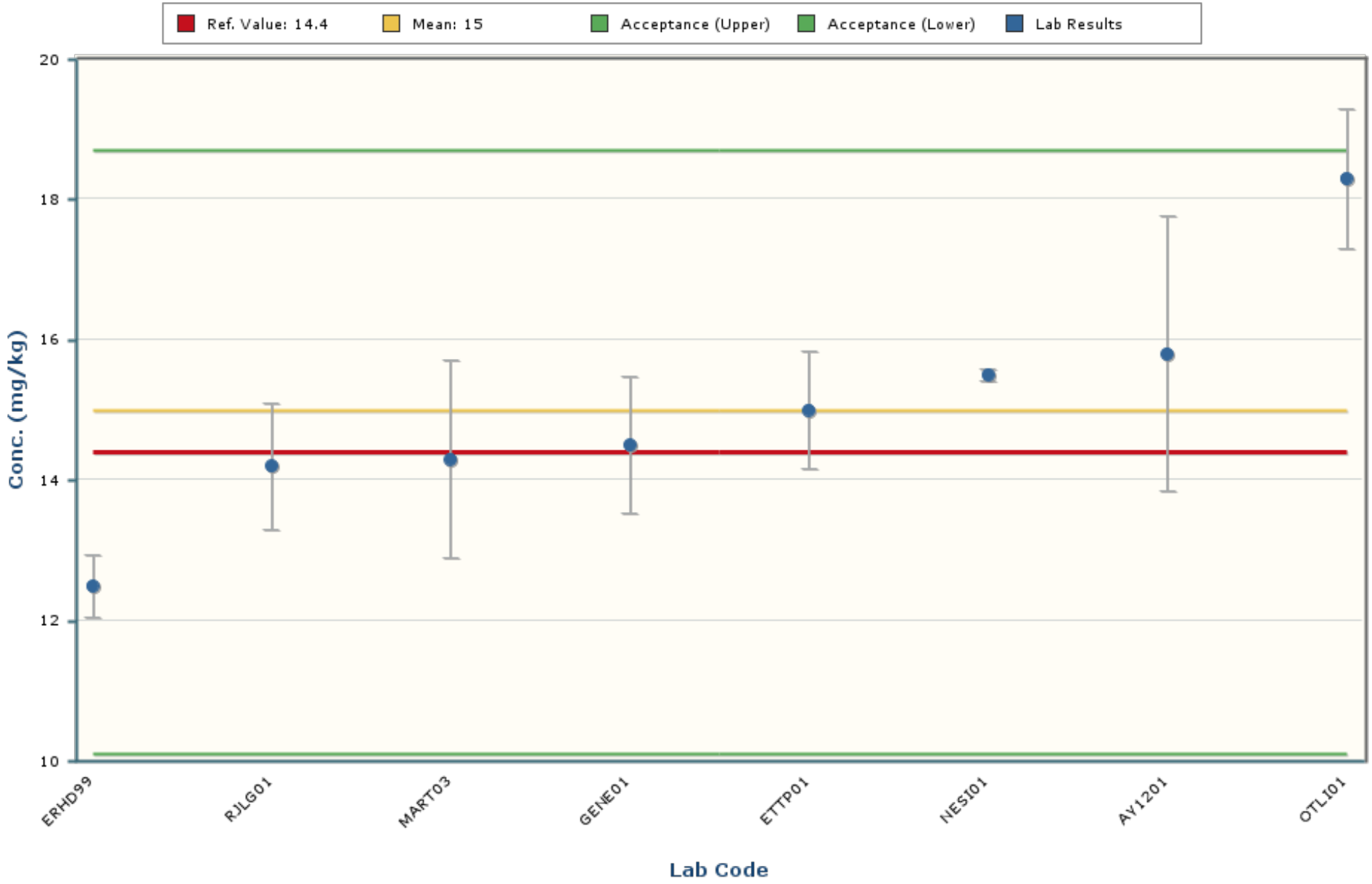
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 2.71 and 8.97 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Copper

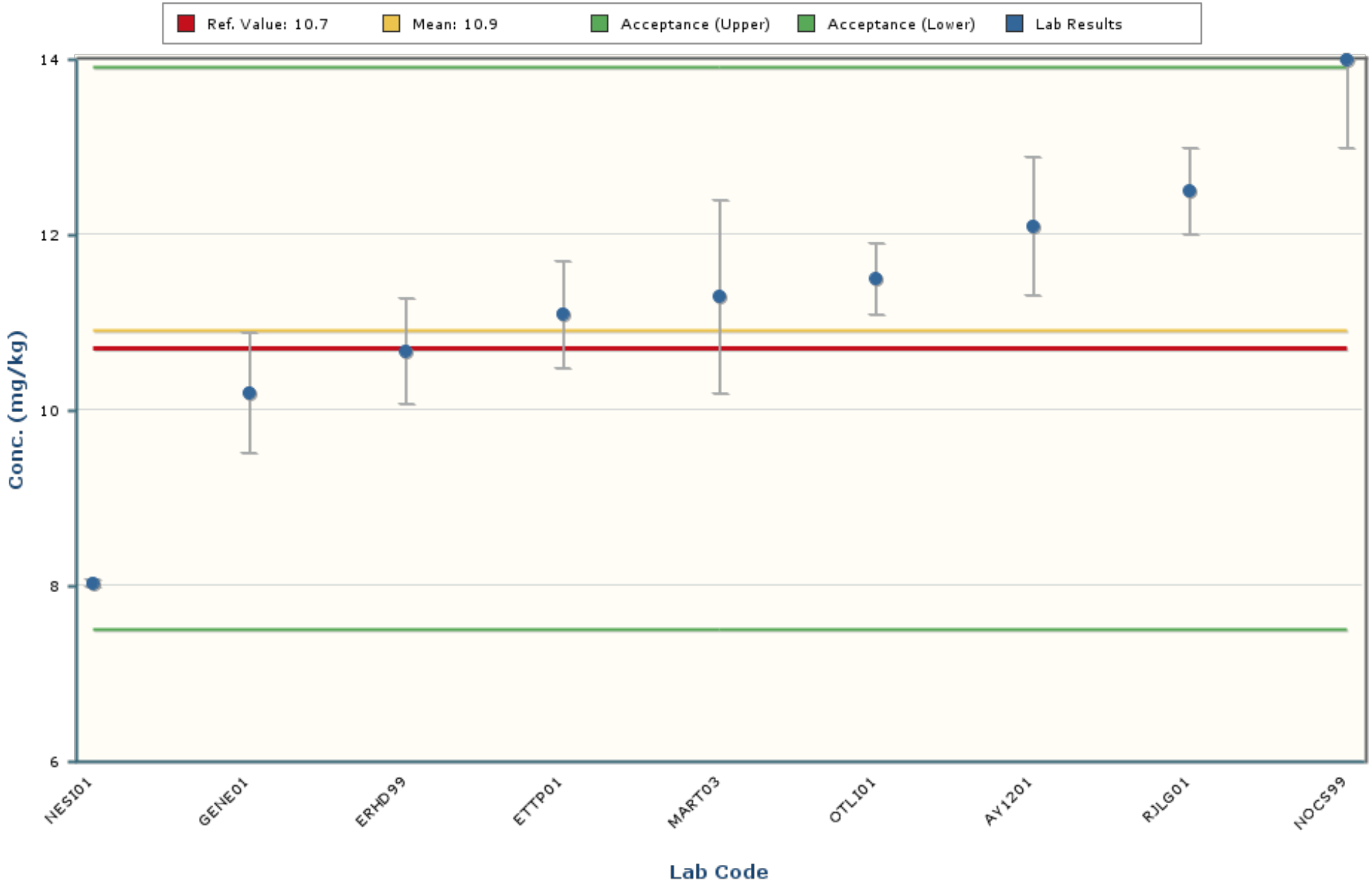
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 6.7 and 23.3 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Lead

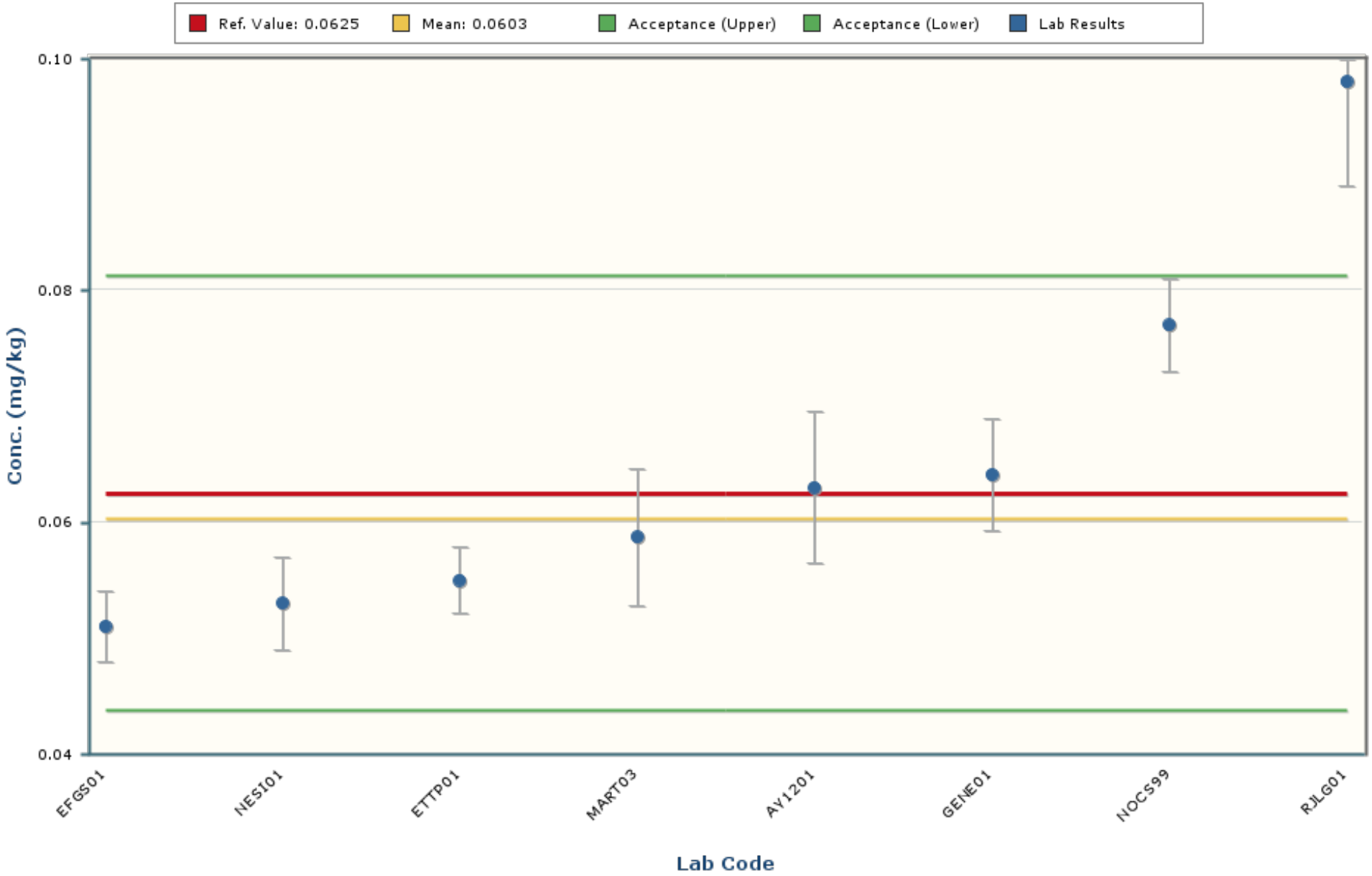
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 4.0 and 17.8 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Mercury

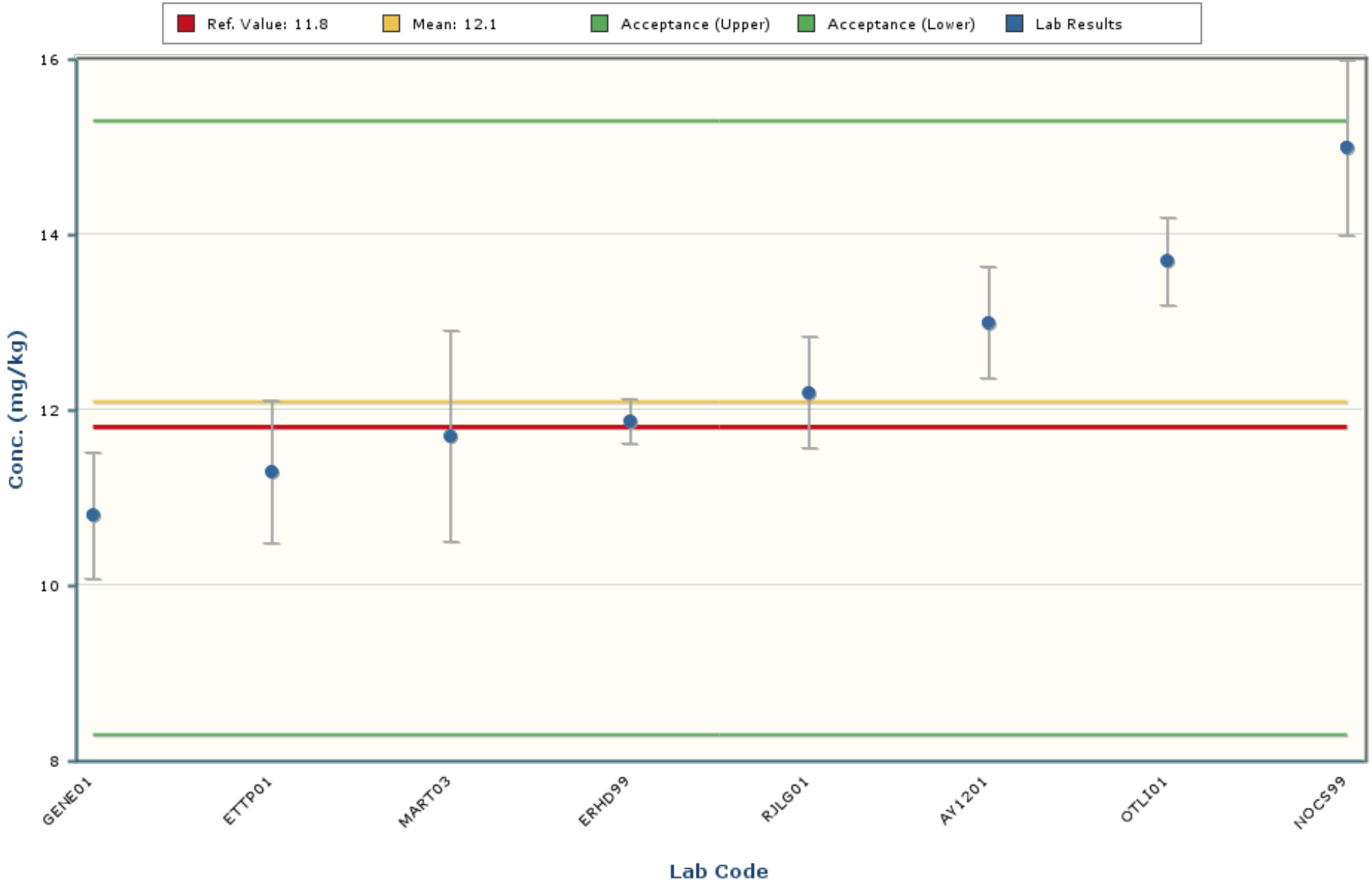
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 0.0160 and 0.1046 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Nickel

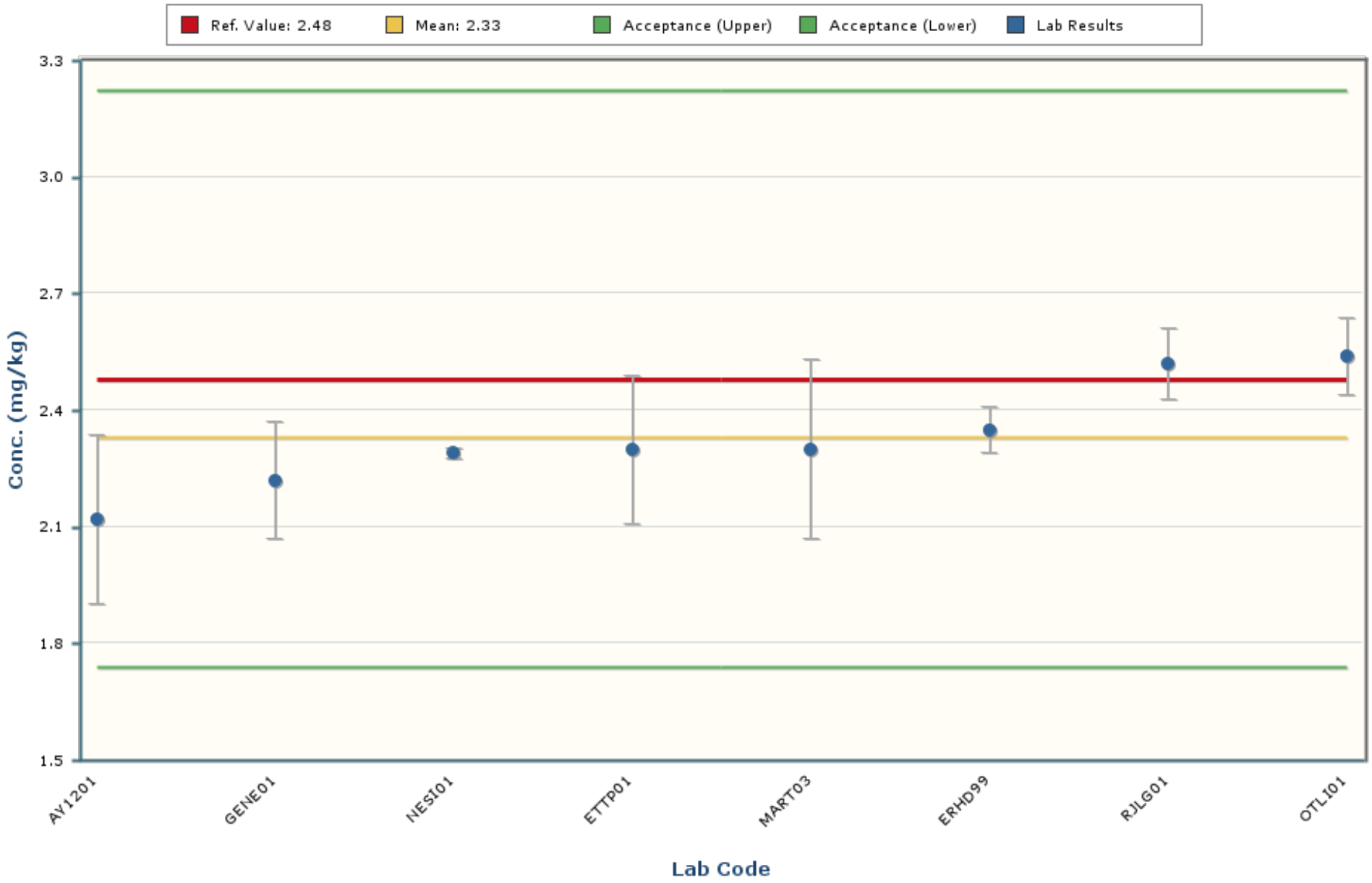
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 7.1 and 17.0 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Silver

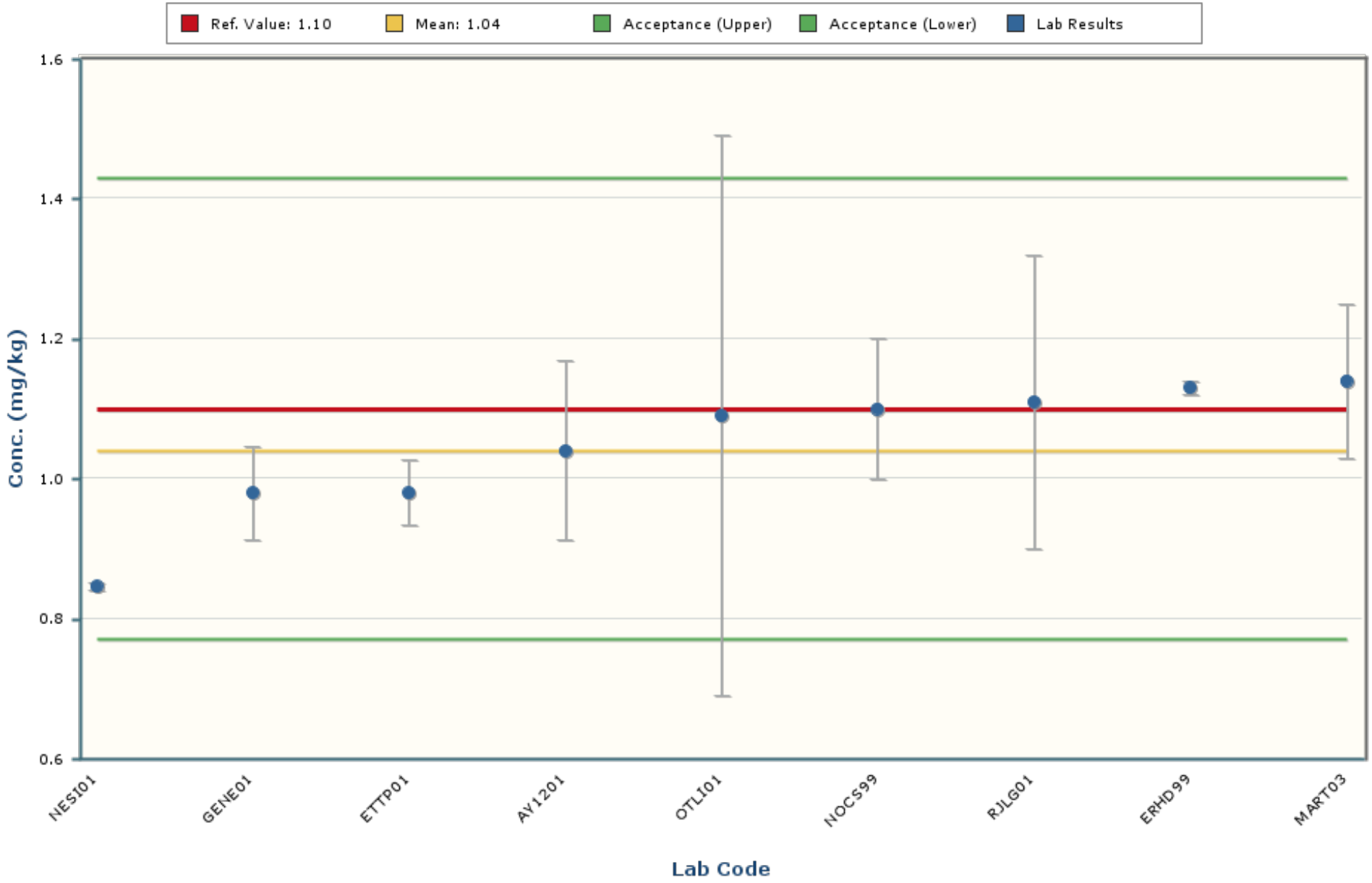
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 1.62 and 3.04 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Thallium

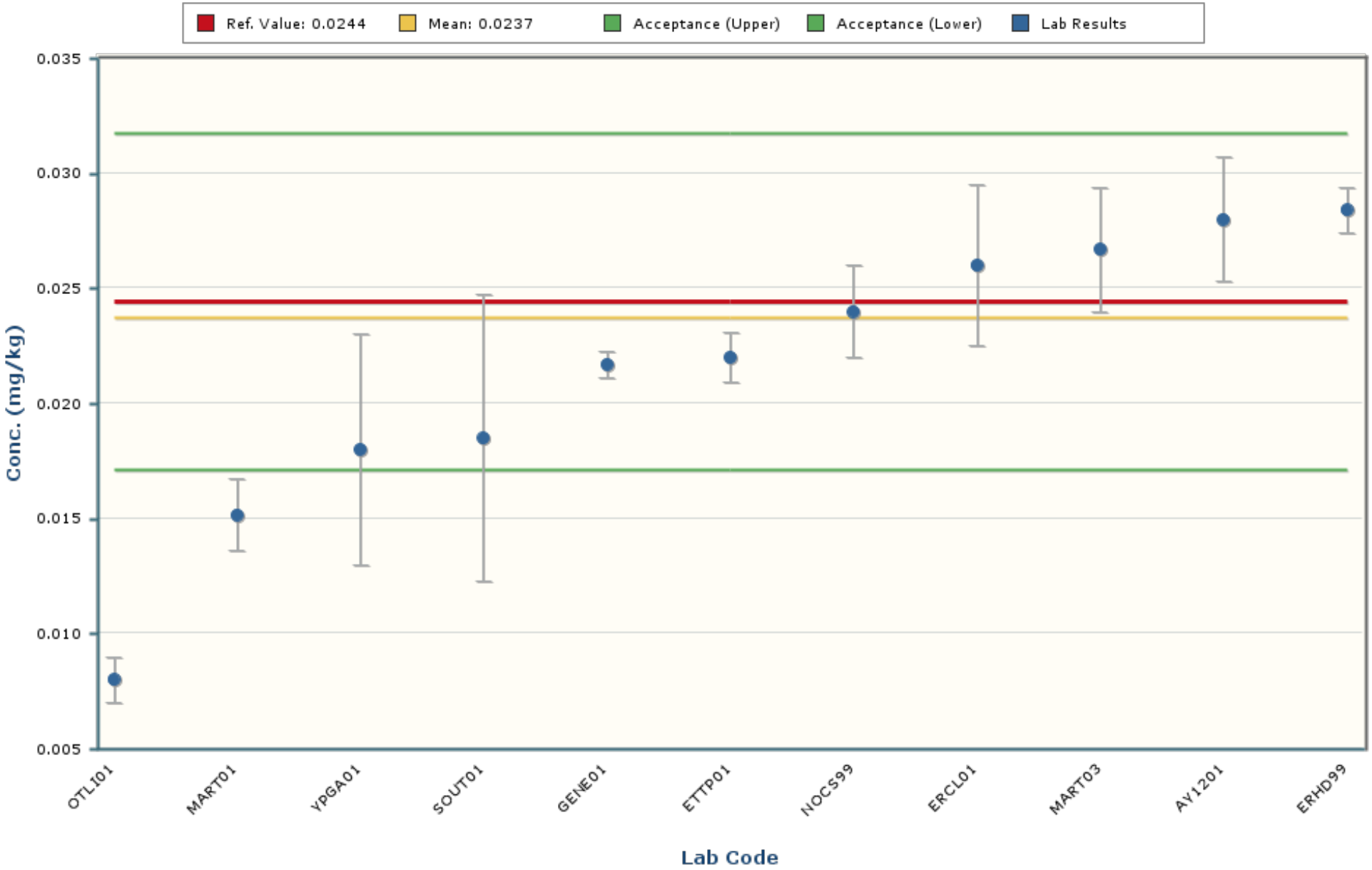
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 0.54 and 1.54 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Uranium-235

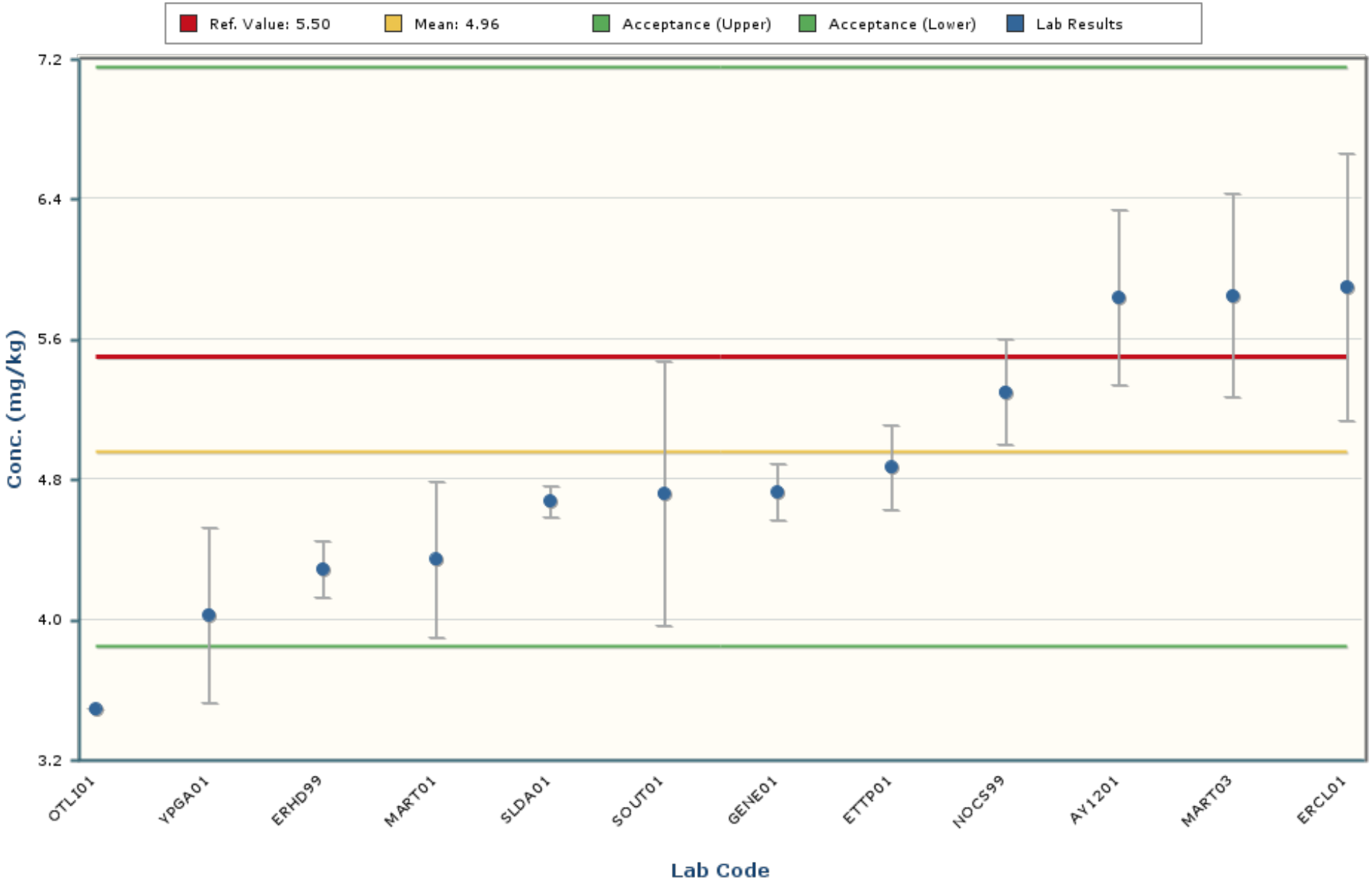
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 0.0042 and 0.0432 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Uranium-238

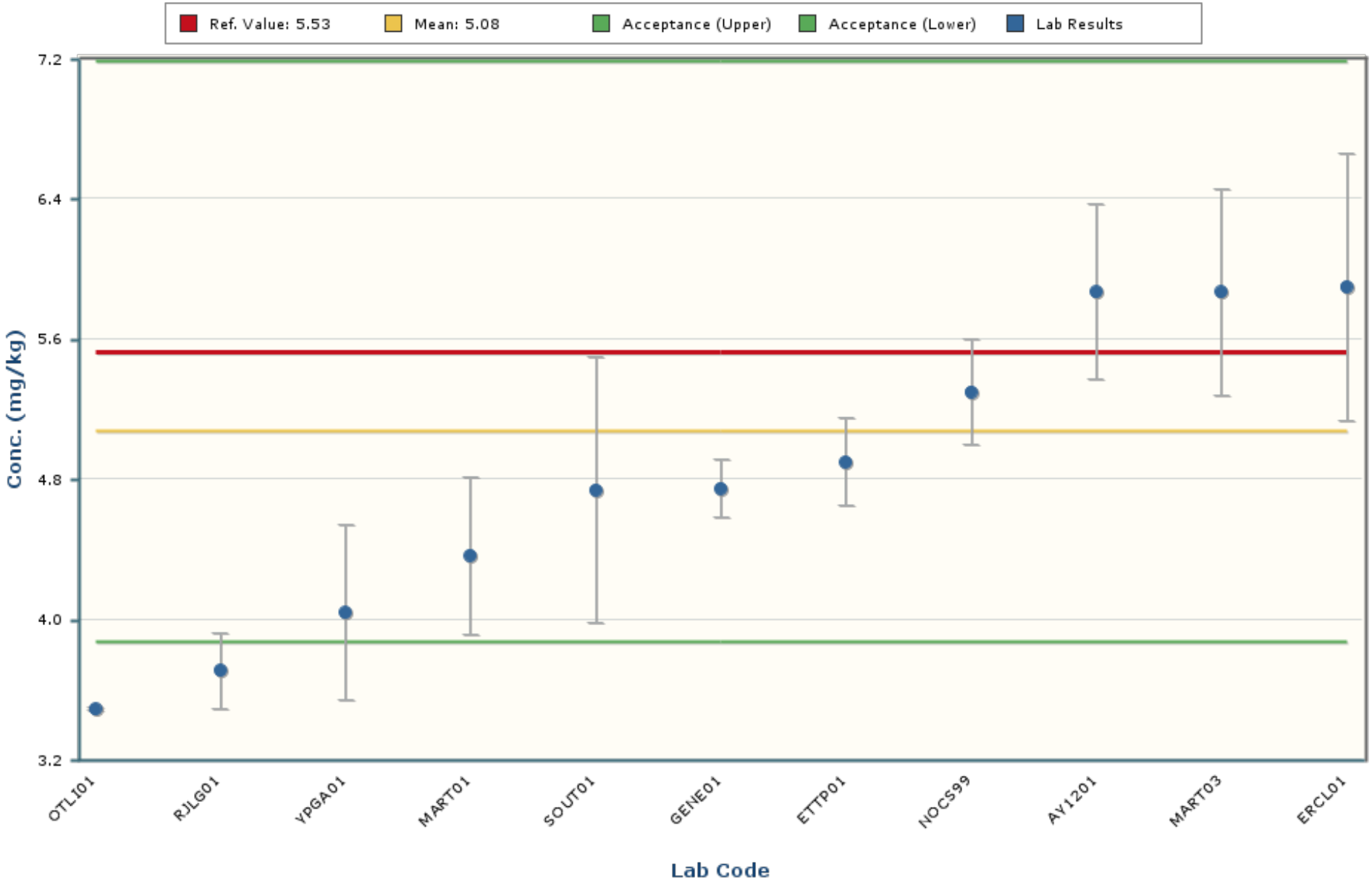
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 1.62 and 8.30 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Uranium-Total

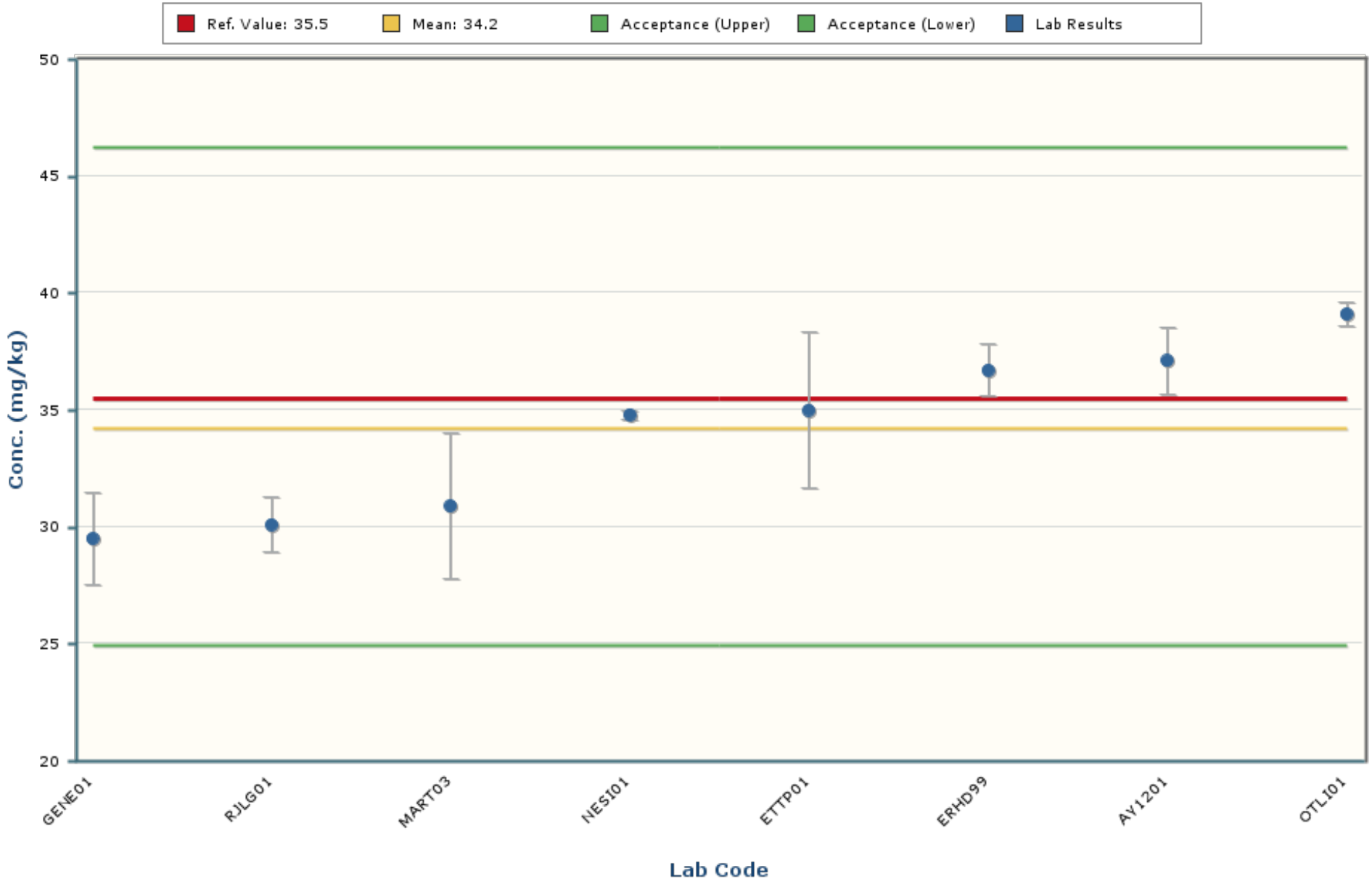
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 1.63 and 8.53 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Vanadium

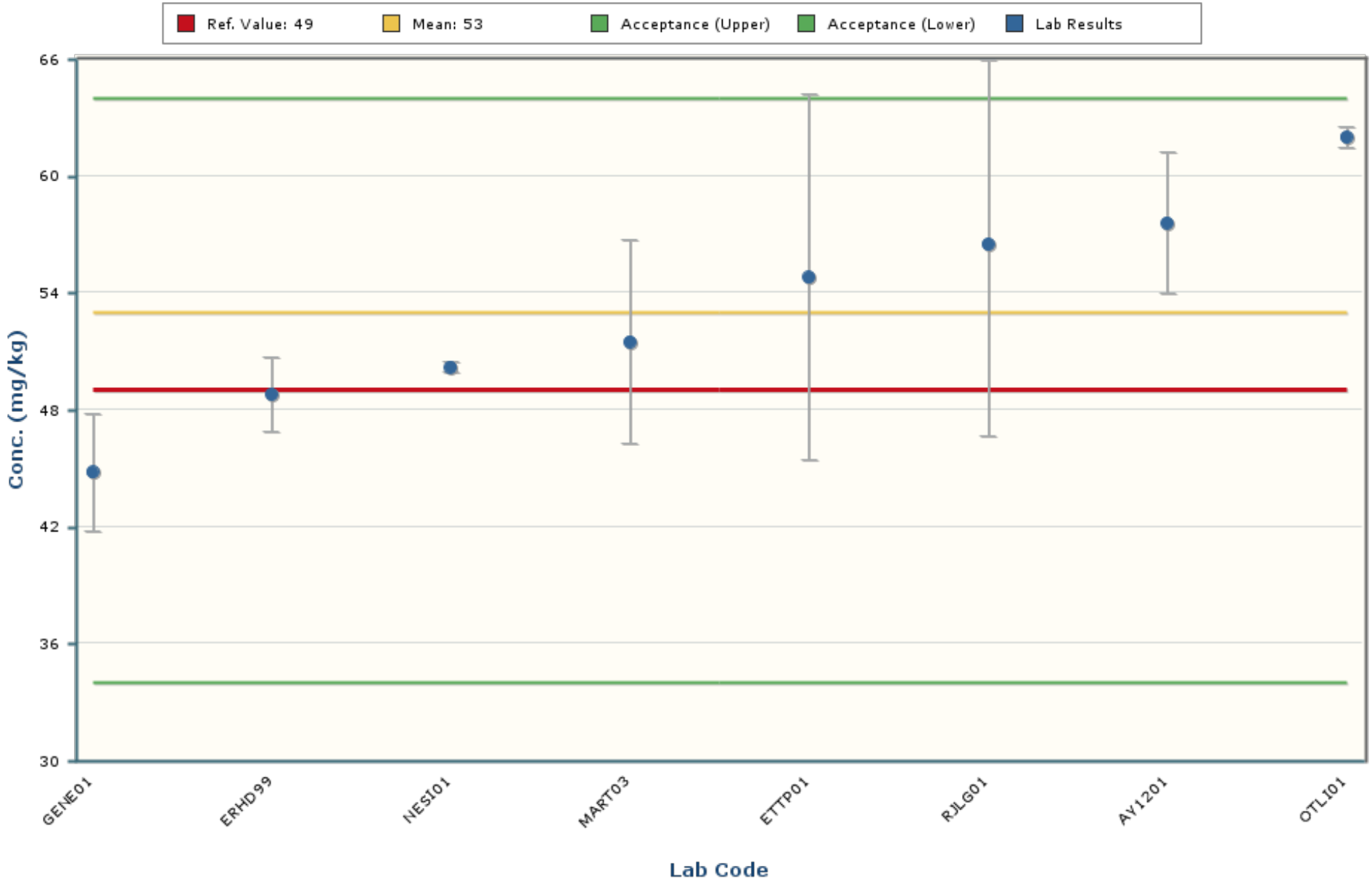
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 16.3 and 52.0 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Zinc

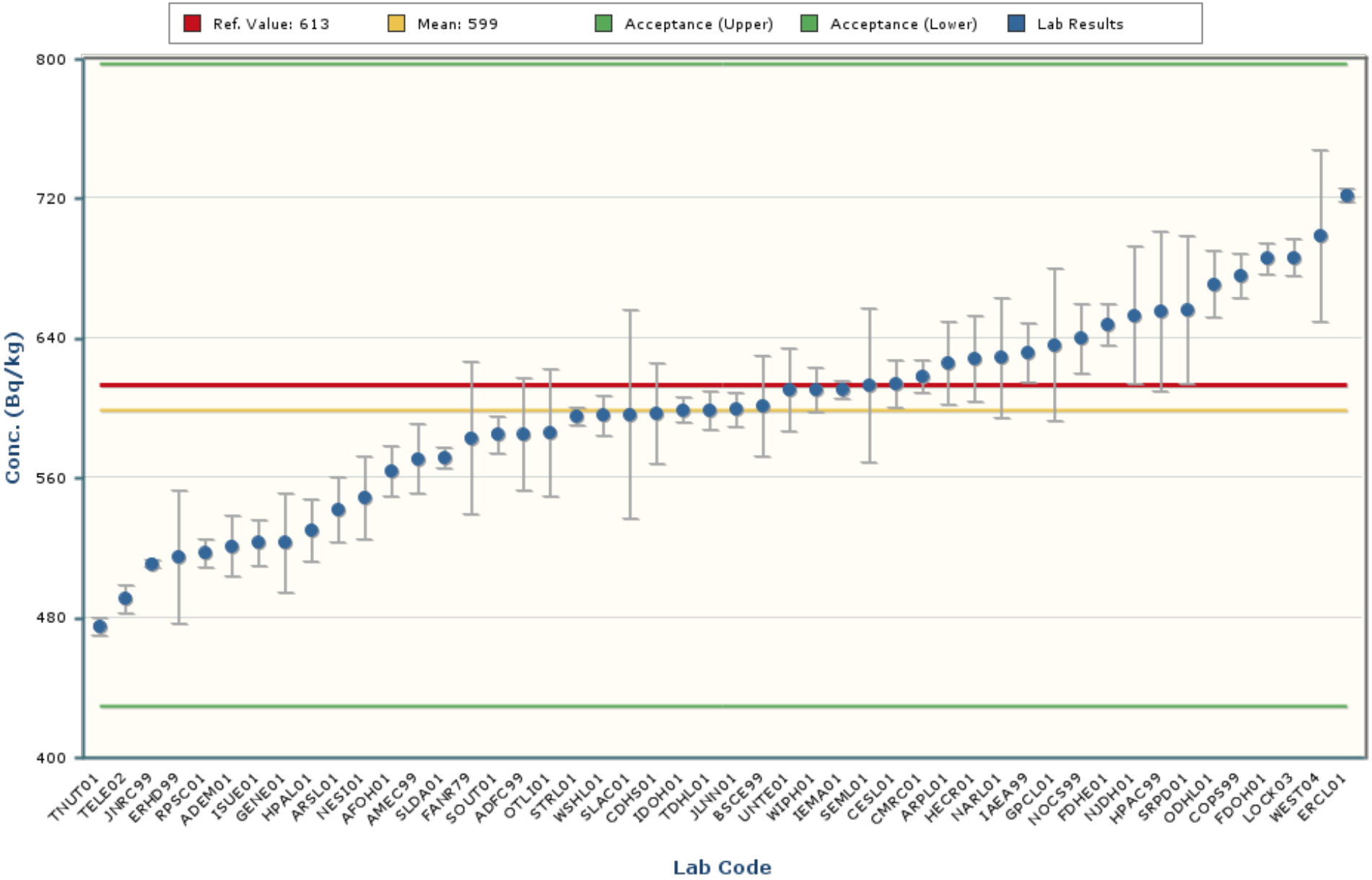
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 26 and 81 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Cesium-134

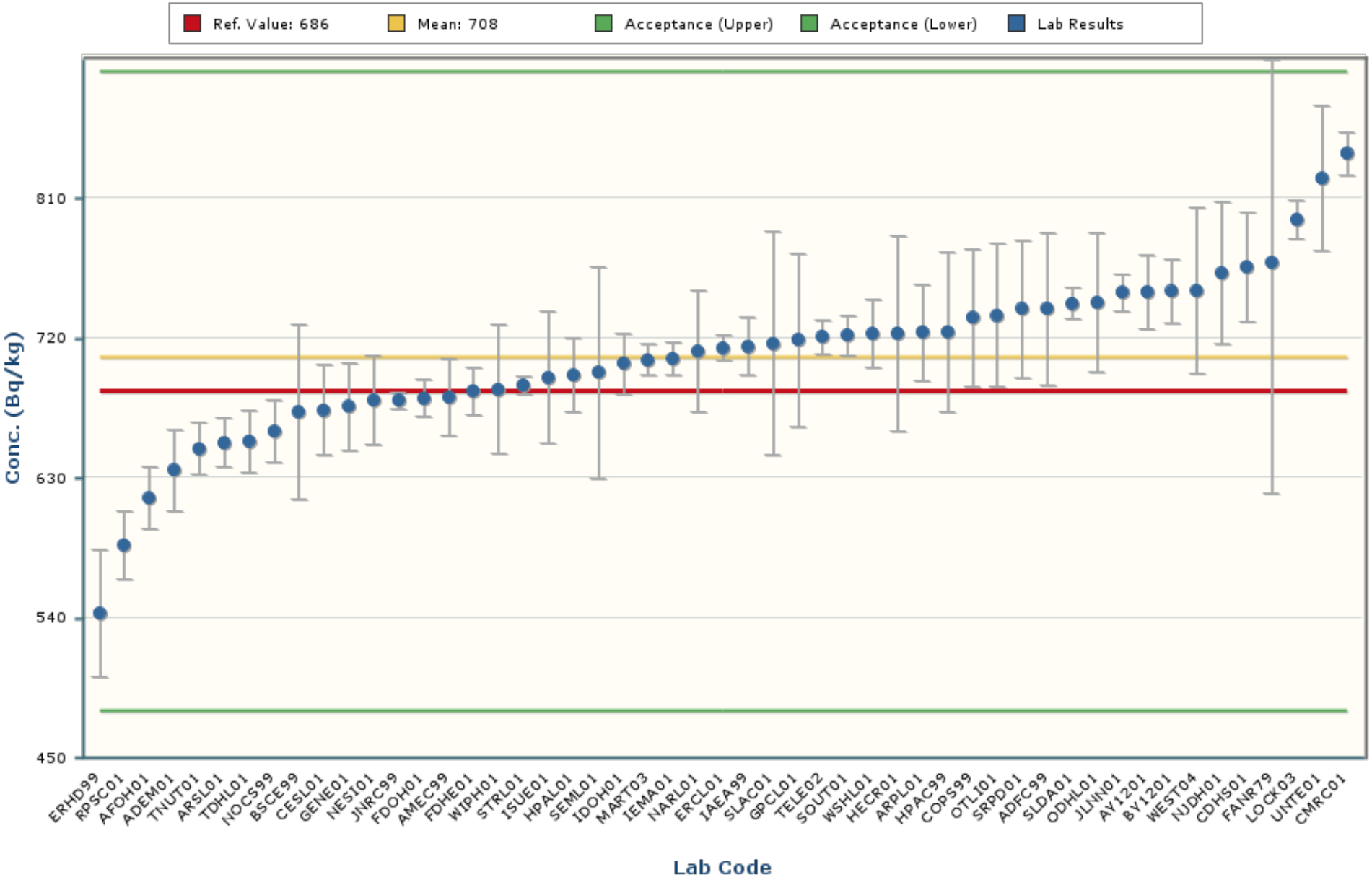
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 315 and 883 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Cesium-137

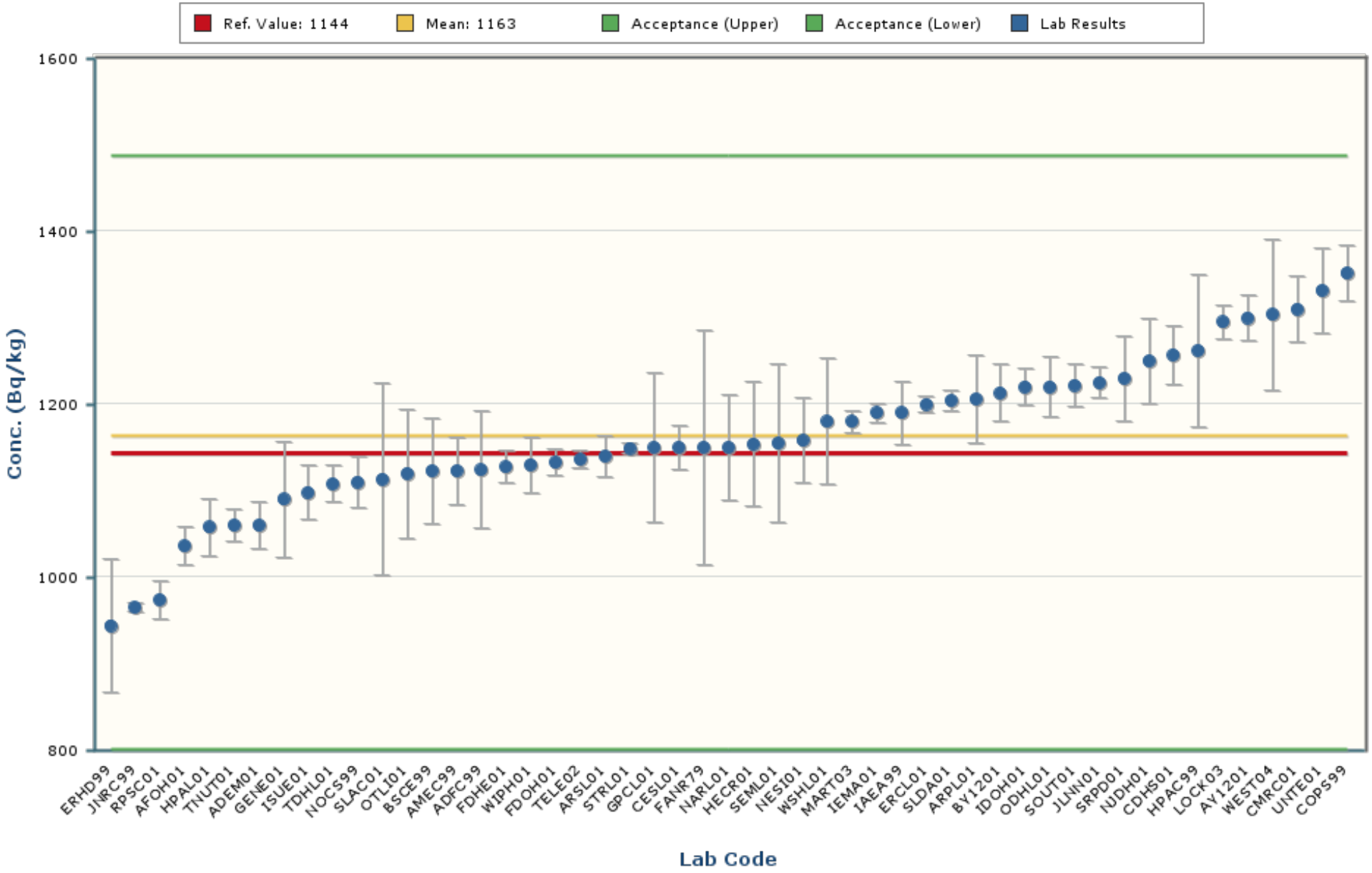
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 446 and 971 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Cobalt-60

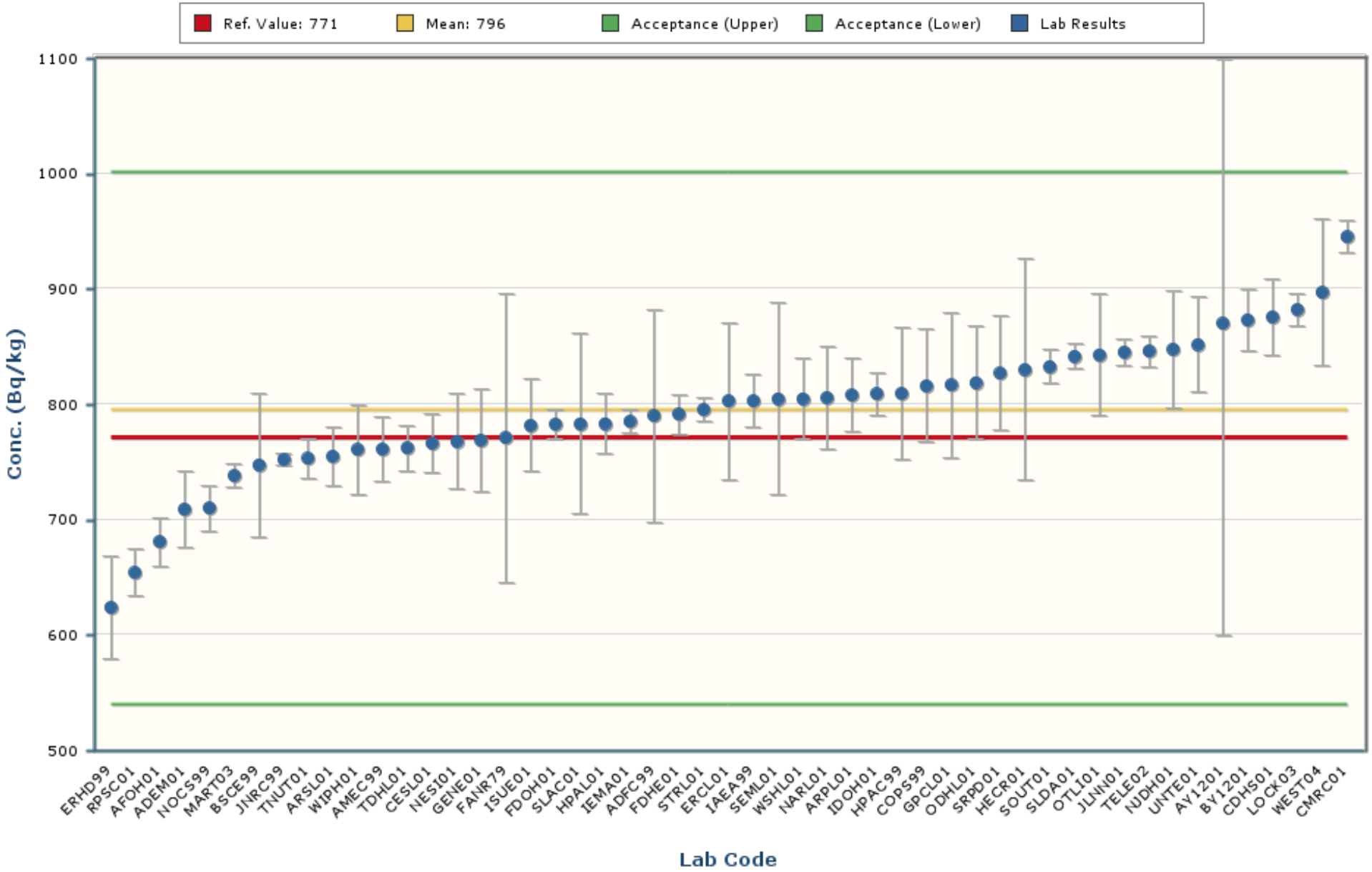
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 718 and 1609 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Manganese-54

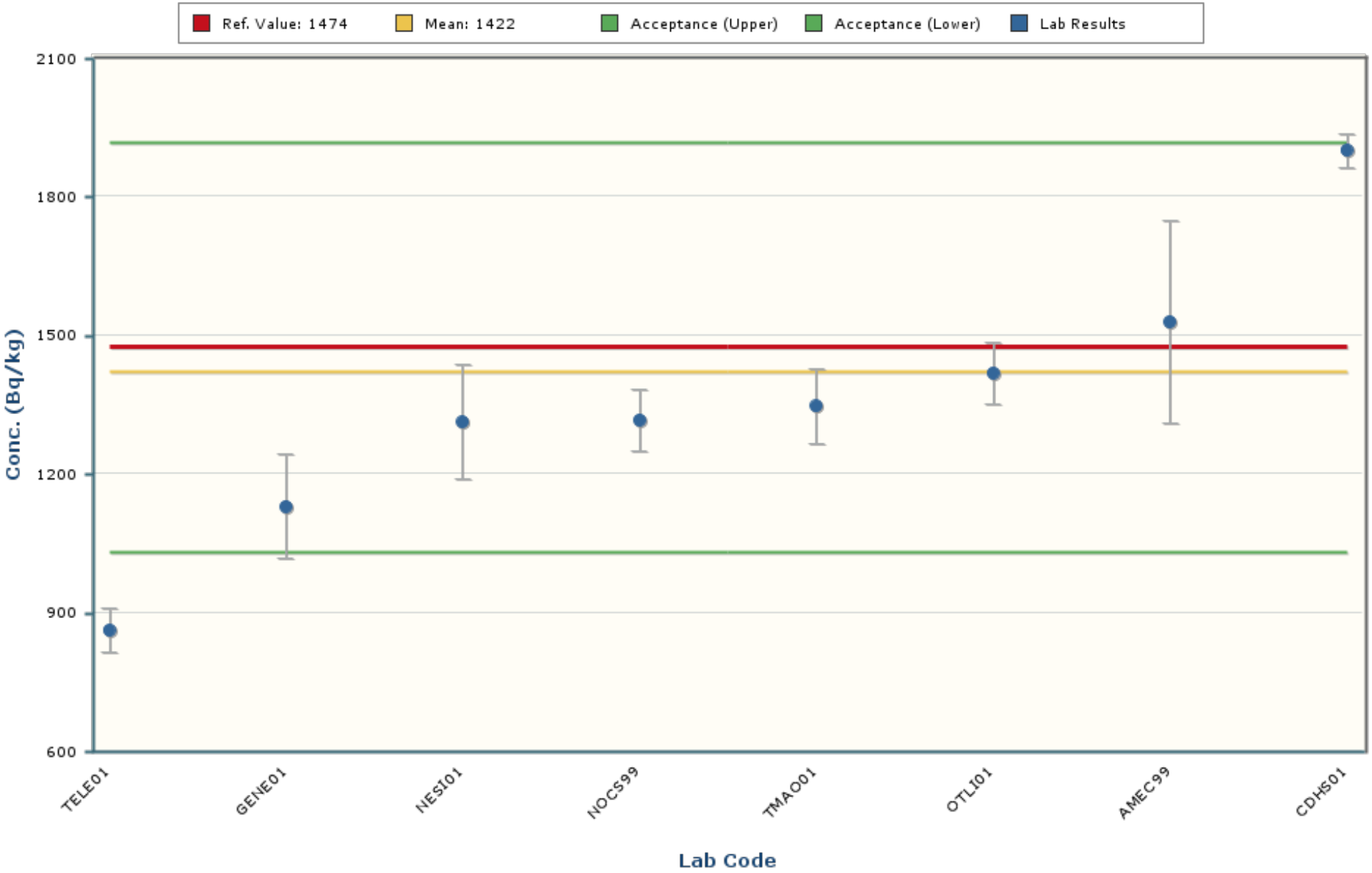
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 500 and 1092 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Nickel-63

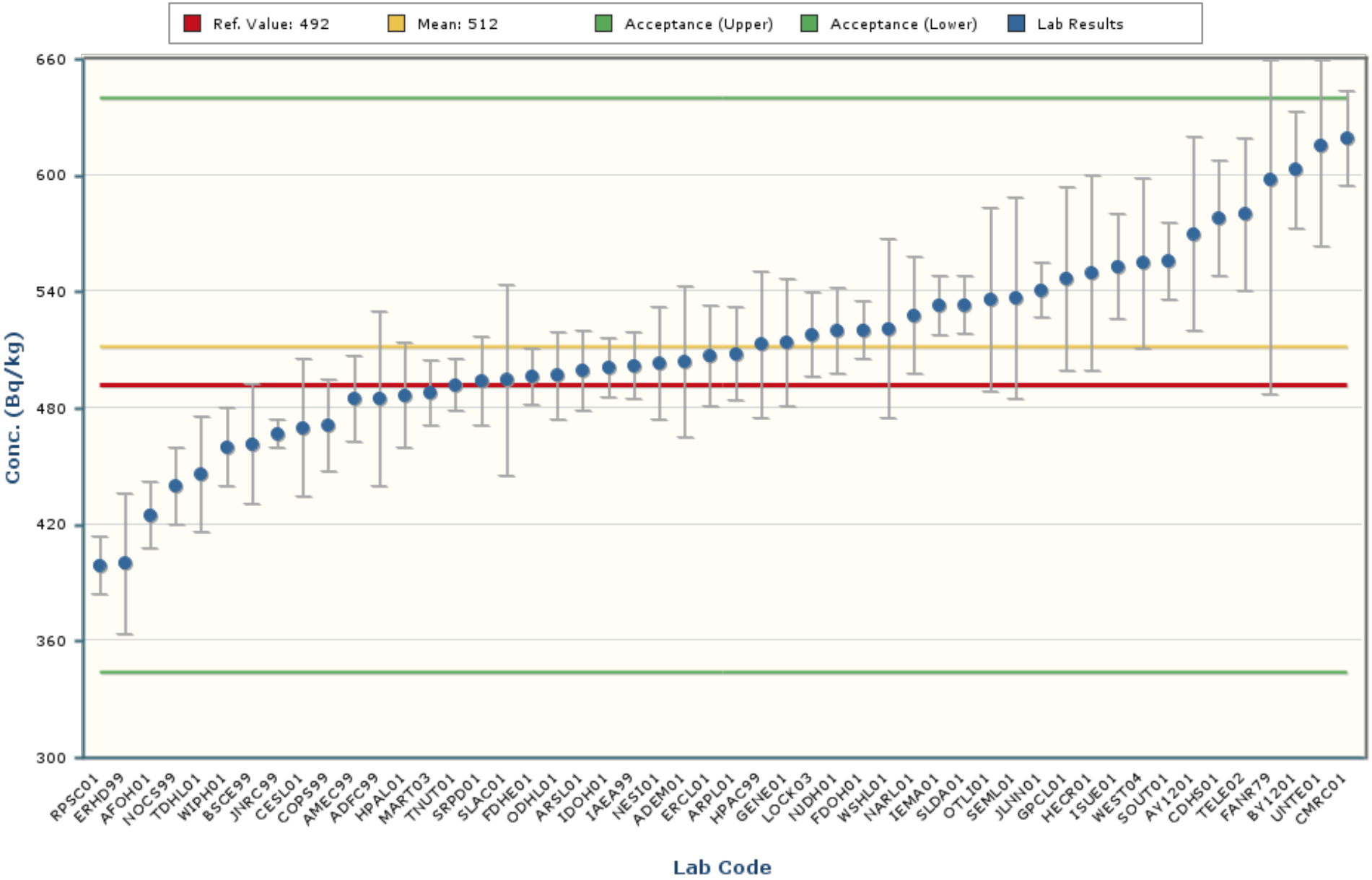
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 207 and 2638 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Potassium-40

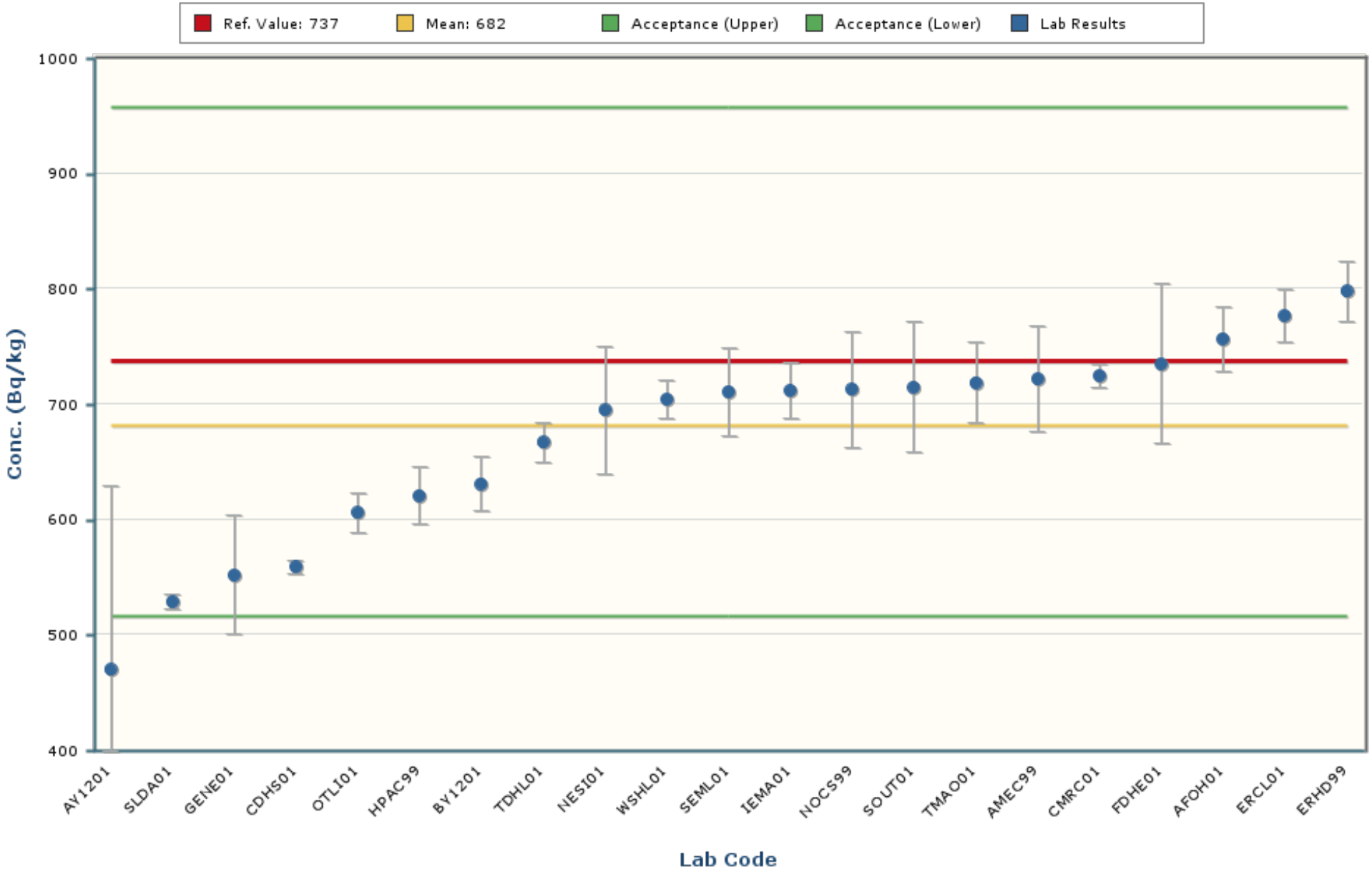
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 265 and 759 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Strontium-90

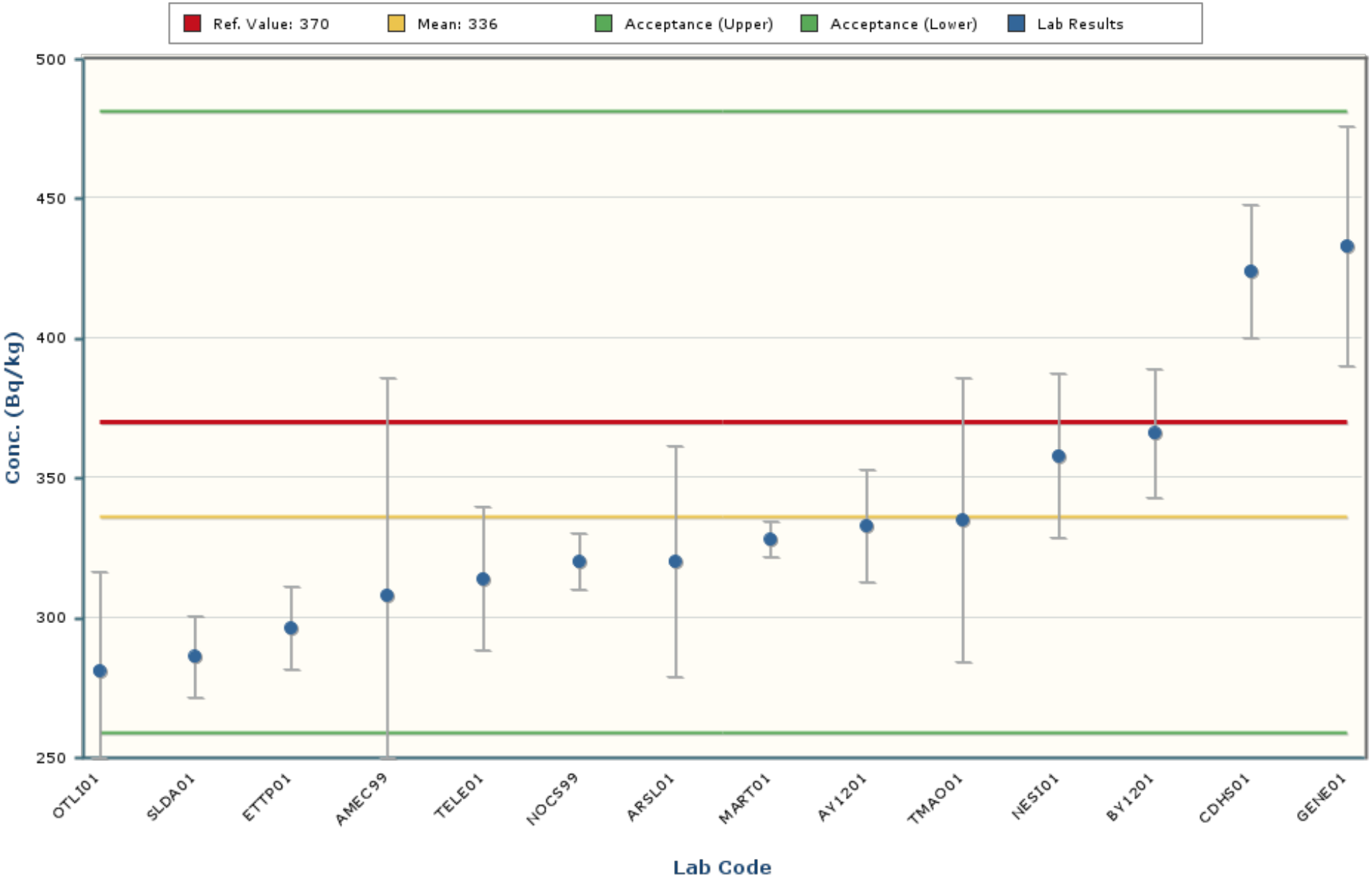
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 305 and 1059 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Technetium-99

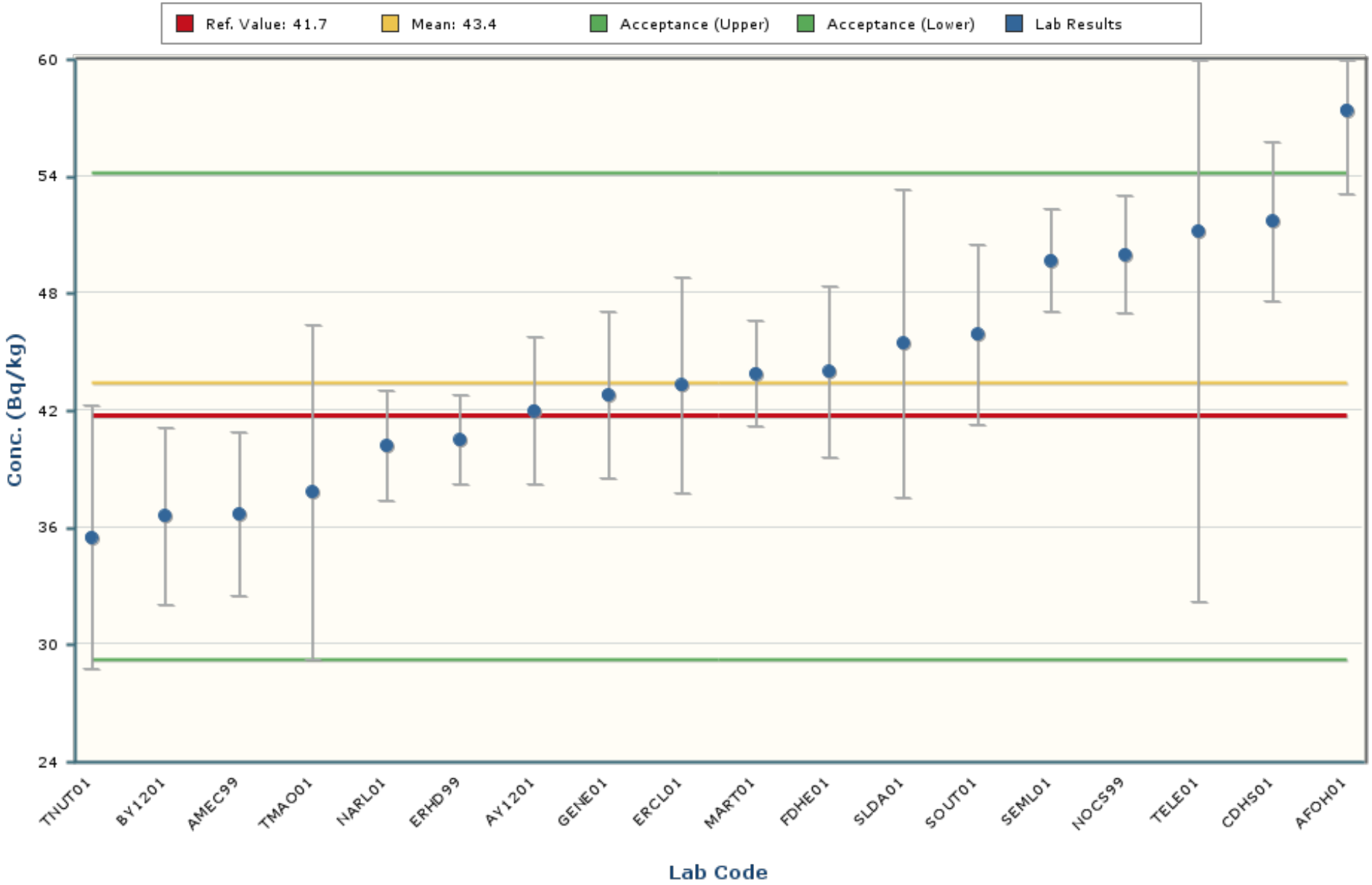
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 106 and 566 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Thorium-228

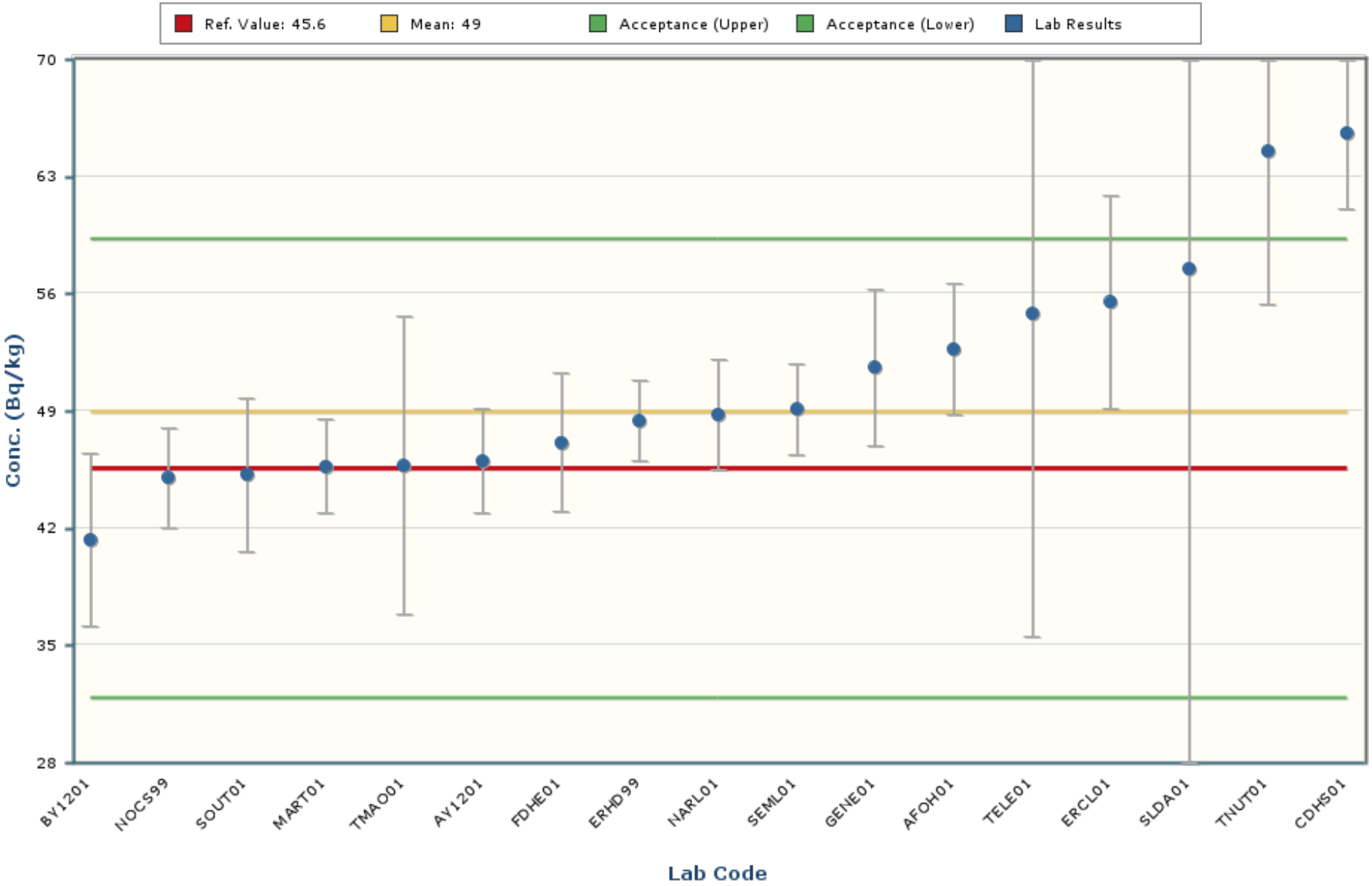
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 17.5 and 69.3 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Thorium-230

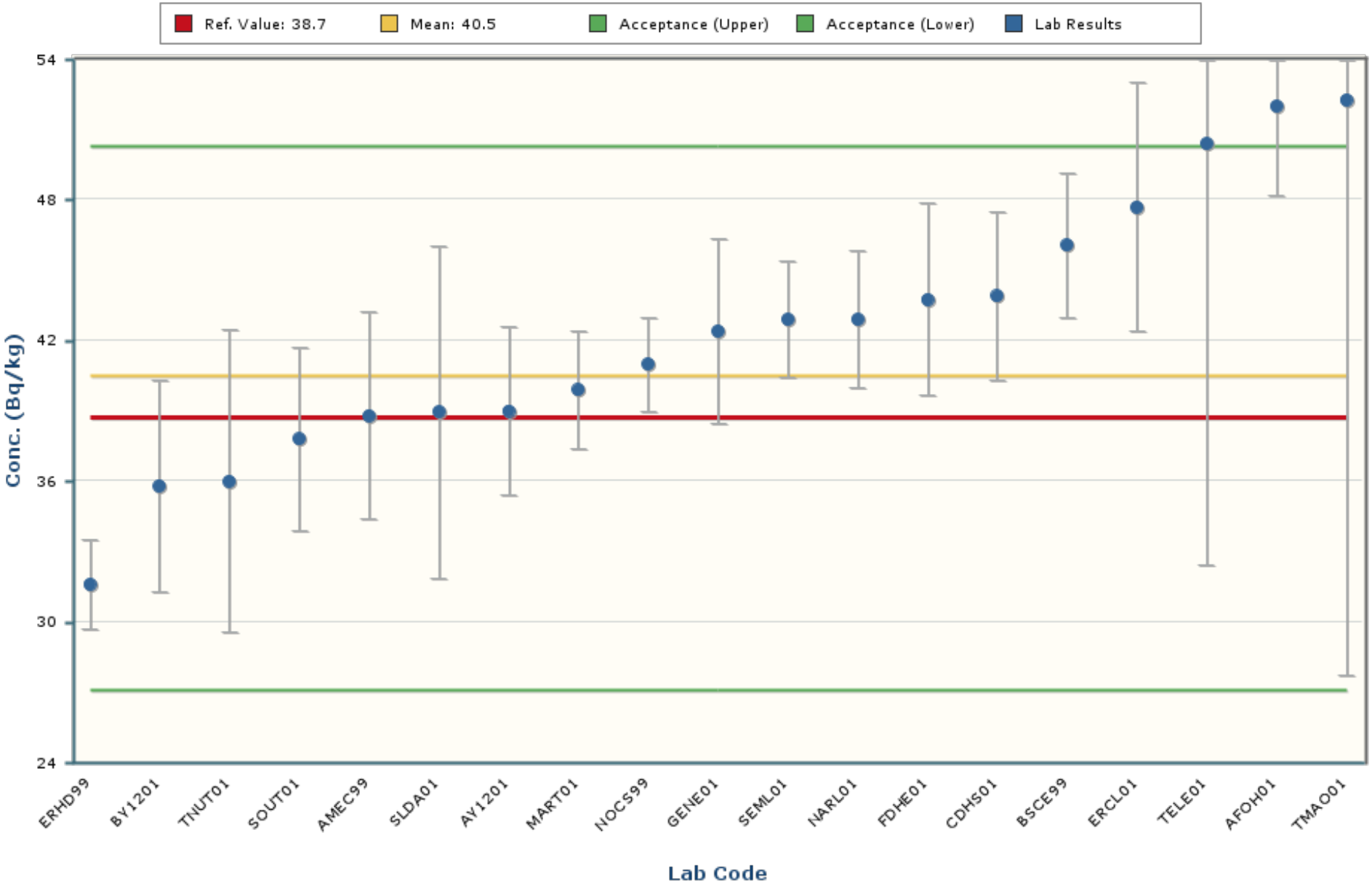
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 26.1 and 71.8 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Thorium-232

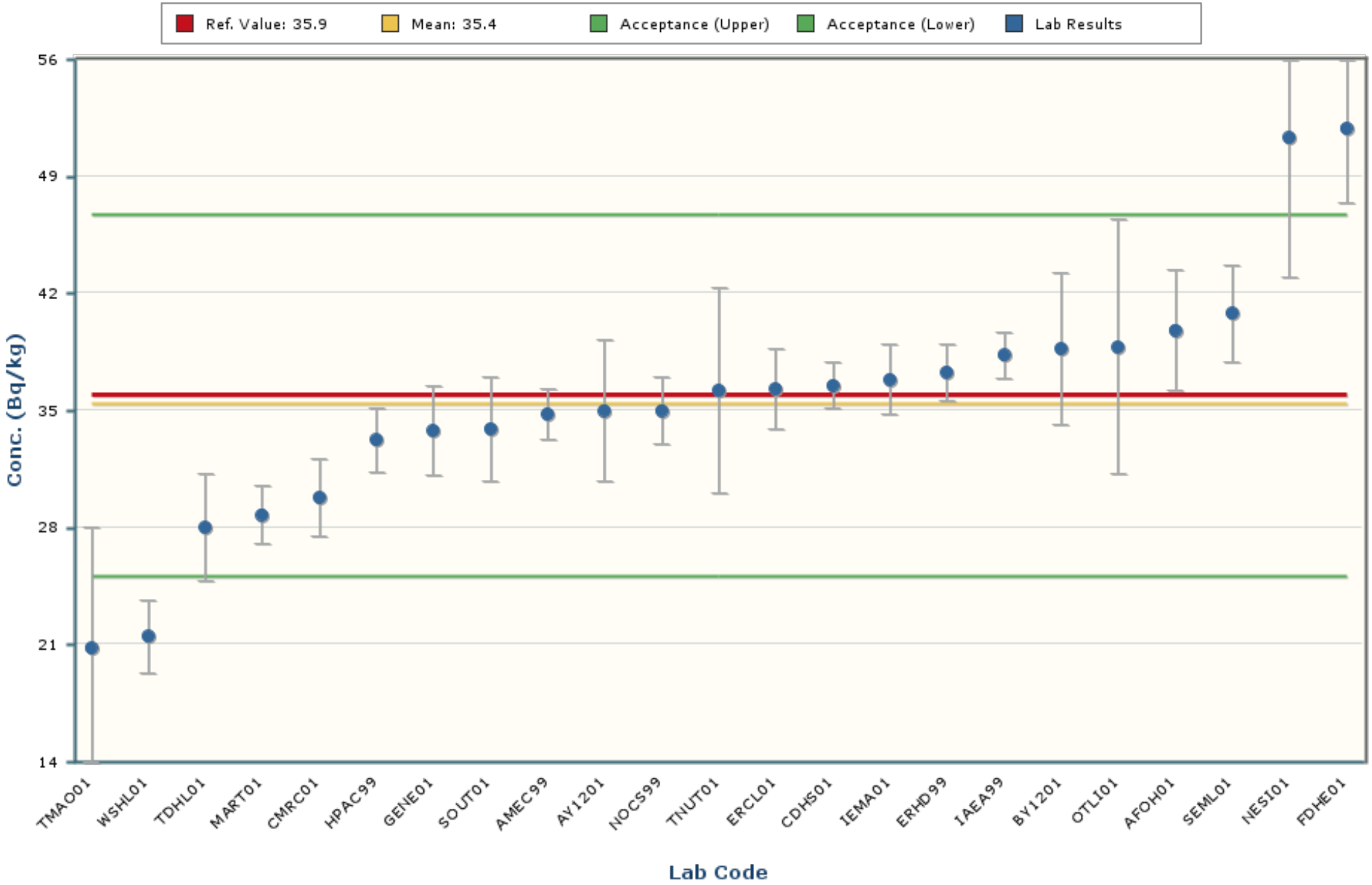
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 19.8 and 61.2 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

Uranium-234

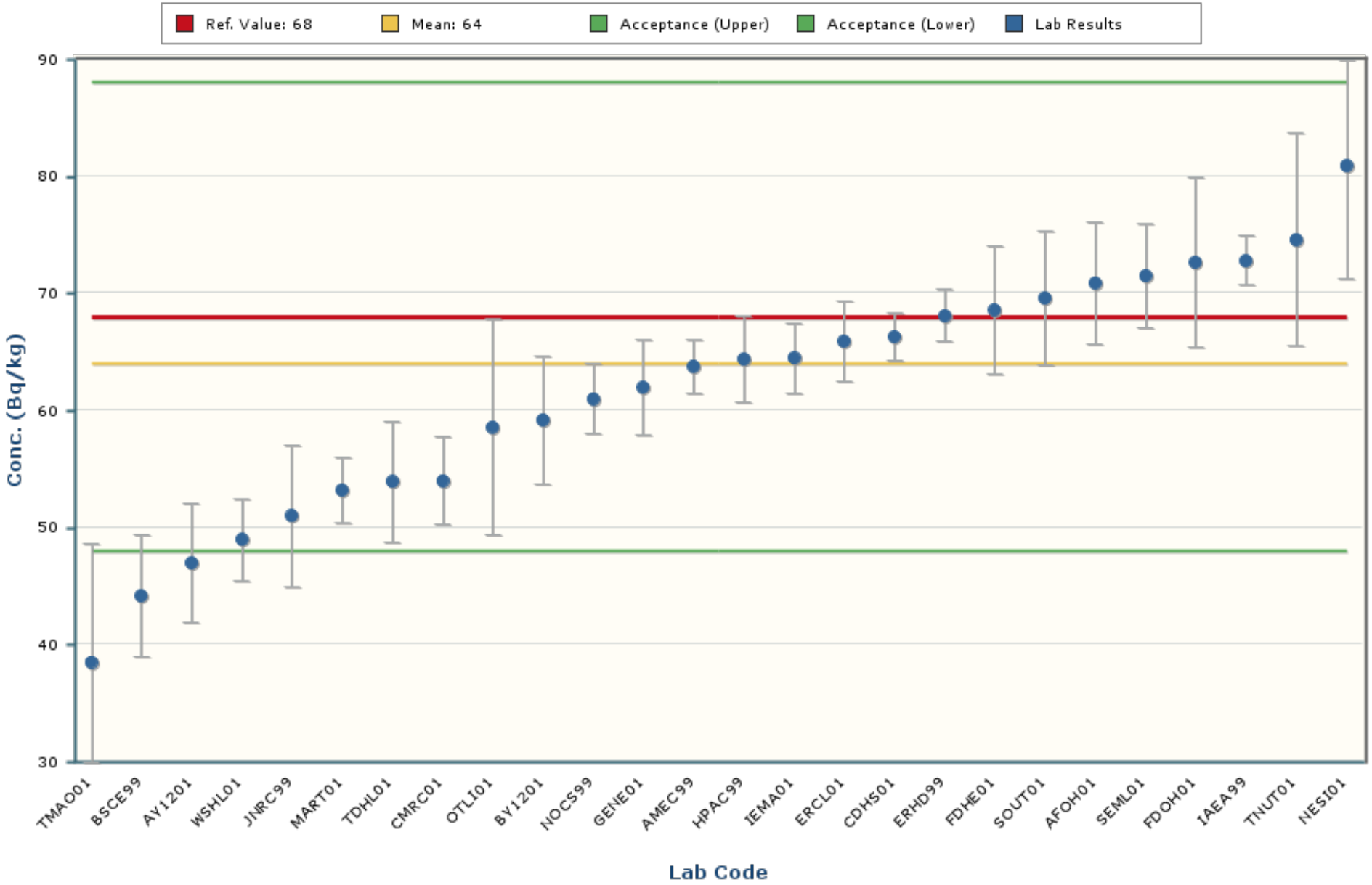
MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 17.6 and 53.2 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

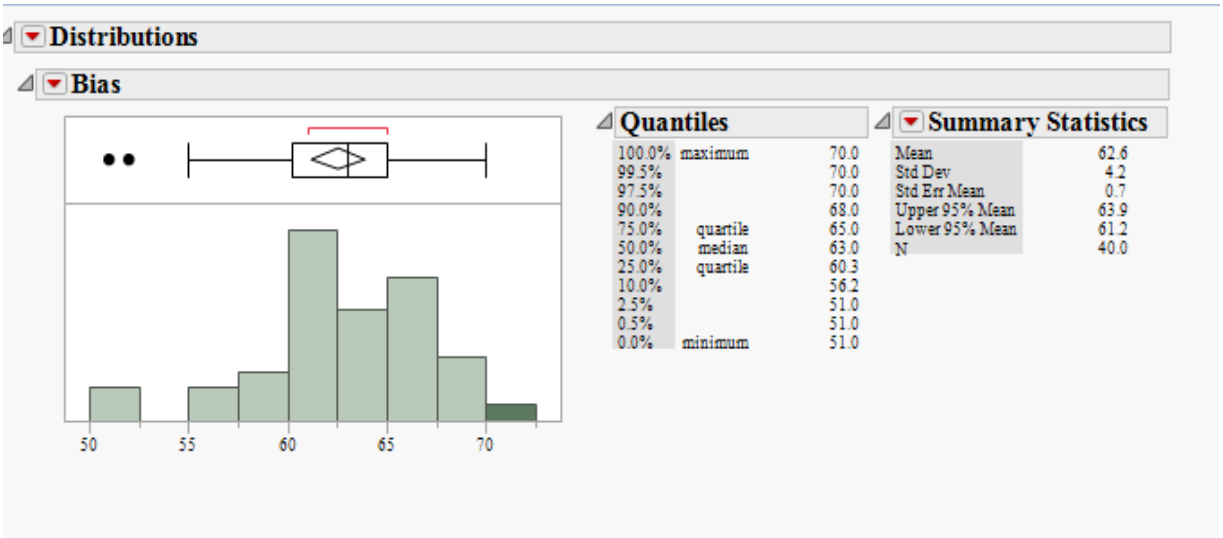
Uranium-238

MAPEP-25-MaS53



Notes:
The chart mean excludes values outside of a bias range of ± 30%.
The chart shows only data points with values between 23 and 106 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at ± one standard deviation.

The intent of the distribution graphs contained within this report is to graphically demonstrate to users how % Bias data within the current MAPEP Series appears when examined by matrix, by analyte, by method of sample preparation or by method of detection. Biases greater than +/- 100% have been screened from the data. The box plot of the bias data points and the mean visually illustrate the breadth of the distribution and where potential outliers in the distribution might lie. The statistics for the distribution plot are provided adjacent to the Bias plot. In some cases, N becomes very small and thus developed statistics may not accurately reflect estimates of the population if N were a significantly larger value.

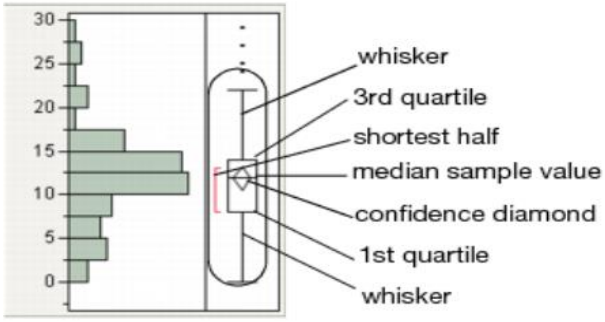


Outlier Box Plot

The BLACK small vertical line inside the small rectangle at the top of the data distribution graph is the median of the population of the bias shown for that analyte in the matrix. The confidence diamond contains the mean and the upper and lower 95% of the mean. If you drew a line through the middle of the diamond, you would have the mean. The top and bottom points of the diamond represent the upper and lower 95% of the mean. The ends of the box represent the 25th and 75th quantiles, also expressed as 1st and 3rd quartile. The difference between the 1st and 3rd quartiles is called the interquartile range. Each box has lines that extend from each end, sometimes called whiskers. The whiskers extend from the ends of the box to the outermost data point that falls within the distances computed as follows:

3rd quartile + 1.5*(interquartile range)

1st quartile - 1.5*(interquartile range)



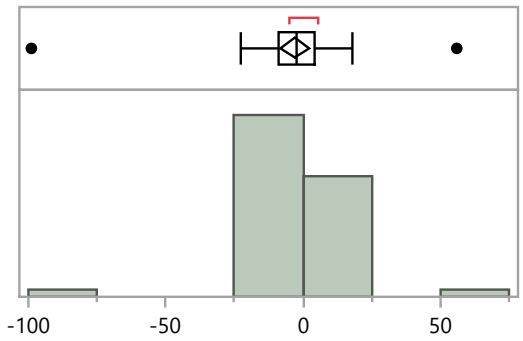
If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

Ref. "SAS Institute Inc. 2016. JMP® 13 Basic Analysis. Cary, NC: SAS Institute Inc."

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Cesium-134 Gamma Spectrometry

Bias

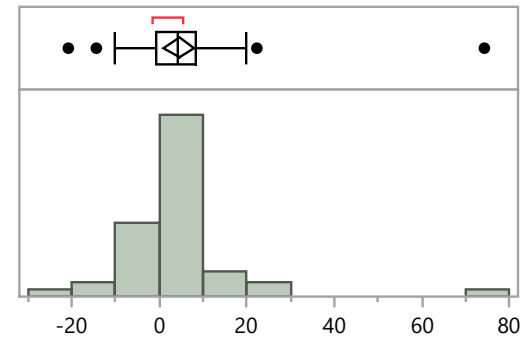


Quantiles		
100.0%	maximum	55.9
99.5%		55.9
97.5%		45.4
90.0%		11.7
75.0%	quartile	4.0
50.0%	median	-2.3
25.0%	quartile	-8.6
10.0%		-16.0
2.5%		-77.8
0.5%		-98.8
0.0%	minimum	-98.8

Summary Statistics	
Mean	-3.1
Std Dev	18.5
Std Err Mean	2.6
Upper 95% Mean	2.2
Lower 95% Mean	-8.3
N	50.0

Distributions Analyte_Detection=Cesium-137 Gamma Spectrometry

Bias

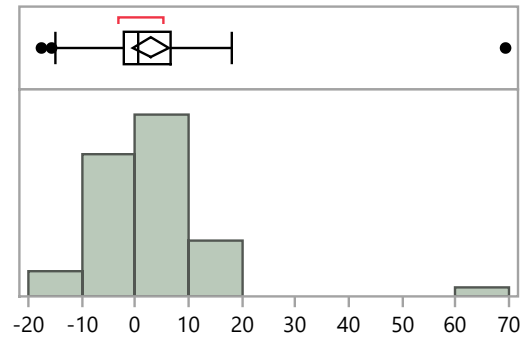


Quantiles		
100.0%	maximum	74.3
99.5%		74.3
97.5%		57.4
90.0%		12.0
75.0%	quartile	8.2
50.0%	median	4.2
25.0%	quartile	-0.9
10.0%		-5.2
2.5%		-18.7
0.5%		-20.8
0.0%	minimum	-20.8

Summary Statistics	
Mean	4.6
Std Dev	12.4
Std Err Mean	1.7
Upper 95% Mean	8.1
Lower 95% Mean	1.1
N	52.0

Distributions Analyte_Detection=Cobalt-60 Gamma Spectrometry

Bias



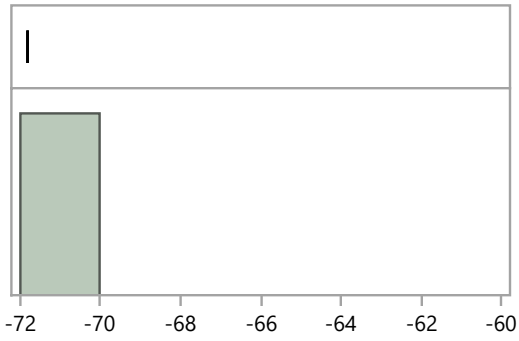
Quantiles		
100.0%	maximum	69.3
99.5%		69.3
97.5%		52.7
90.0%		13.9
75.0%	quartile	6.8
50.0%	median	0.7
25.0%	quartile	-2.0
10.0%		-7.4
2.5%		-16.9
0.5%		-17.5
0.0%	minimum	-17.5

Summary Statistics	
Mean	3.0
Std Dev	12.1
Std Err Mean	1.7
Upper 95% Mean	6.4
Lower 95% Mean	-0.4
N	52.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Iron-55 Gamma Spectrometry

Bias

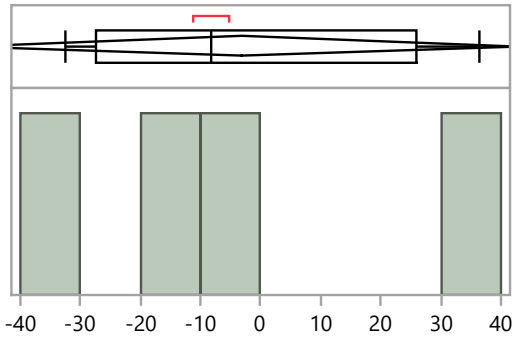


Quantiles		
100.0%	maximum	-71.8
99.5%		-71.8
97.5%		-71.8
90.0%		-71.8
75.0%	quartile	-71.8
50.0%	median	-71.8
25.0%	quartile	-71.8
10.0%		-71.8
2.5%		-71.8
0.5%		-71.8
0.0%	minimum	-71.8

Summary Statistics	
Mean	-71.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Iron-55 Liquid Scintillation Counter

Bias

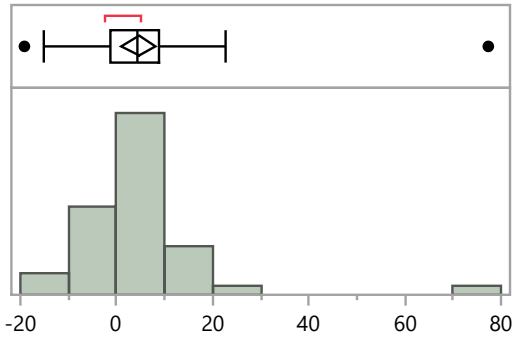


Quantiles		
100.0%	maximum	36.3
99.5%		36.3
97.5%		36.3
90.0%		36.3
75.0%	quartile	25.9
50.0%	median	-8.2
25.0%	quartile	-27.3
10.0%		-32.6
2.5%		-32.6
0.5%		-32.6
0.0%	minimum	-32.6

Summary Statistics	
Mean	-3.2
Std Dev	28.8
Std Err Mean	14.4
Upper 95% Mean	42.7
Lower 95% Mean	-49.0
N	4.0

Distributions Analyte_Detection=Manganese-54 Gamma Spectrometry

Bias



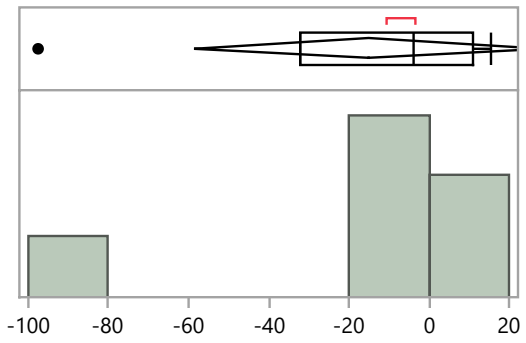
Quantiles		
100.0%	maximum	77.3
99.5%		77.3
97.5%		59.5
90.0%		13.5
75.0%	quartile	8.9
50.0%	median	4.2
25.0%	quartile	-1.1
10.0%		-6.8
2.5%		-17.8
0.5%		-19.1
0.0%	minimum	-19.1

Summary Statistics	
Mean	4.6
Std Dev	12.8
Std Err Mean	1.8
Upper 95% Mean	8.2
Lower 95% Mean	1.1
N	52.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Neptunium-237 Alpha Spectrometry

Bias

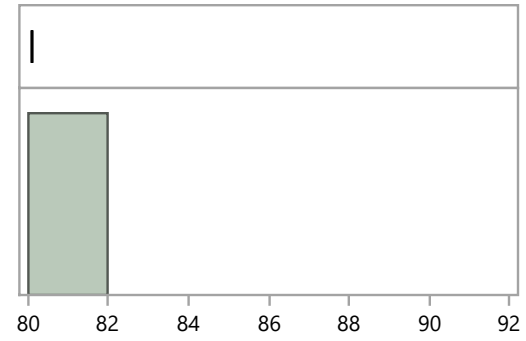


Quantiles		
100.0%	maximum	15.5
99.5%		15.5
97.5%		15.5
90.0%		15.5
75.0%	quartile	11.0
50.0%	median	-3.7
25.0%	quartile	-32.2
10.0%		-97.5
2.5%		-97.5
0.5%		-97.5
0.0%	minimum	-97.5

Summary Statistics	
Mean	-15.0
Std Dev	41.5
Std Err Mean	16.9
Upper 95% Mean	28.5
Lower 95% Mean	-58.6
N	6.0

Distributions Analyte_Detection=Neptunium-237 Gamma Spectrometry

Bias

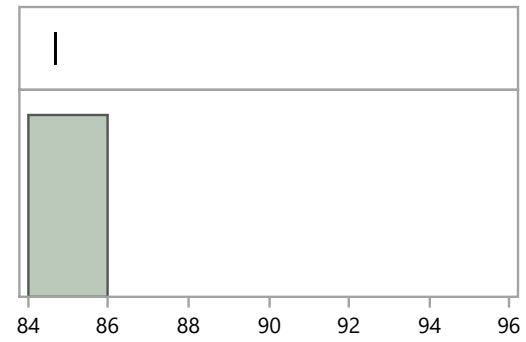


Quantiles		
100.0%	maximum	80.1
99.5%		80.1
97.5%		80.1
90.0%		80.1
75.0%	quartile	80.1
50.0%	median	80.1
25.0%	quartile	80.1
10.0%		80.1
2.5%		80.1
0.5%		80.1
0.0%	minimum	80.1

Summary Statistics	
Mean	80.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Neptunium-237 Liquid Scintillation Counter

Bias



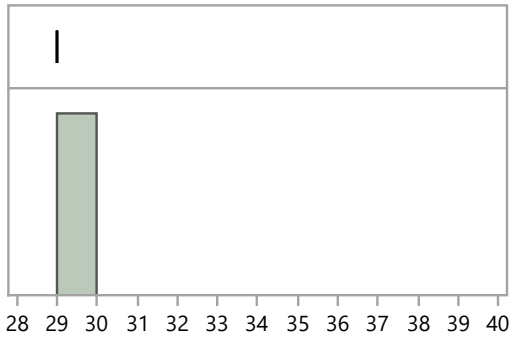
Quantiles		
100.0%	maximum	84.7
99.5%		84.7
97.5%		84.7
90.0%		84.7
75.0%	quartile	84.7
50.0%	median	84.7
25.0%	quartile	84.7
10.0%		84.7
2.5%		84.7
0.5%		84.7
0.0%	minimum	84.7

Summary Statistics	
Mean	84.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Nickel-63 Gas Flow Proportional Counter

Bias

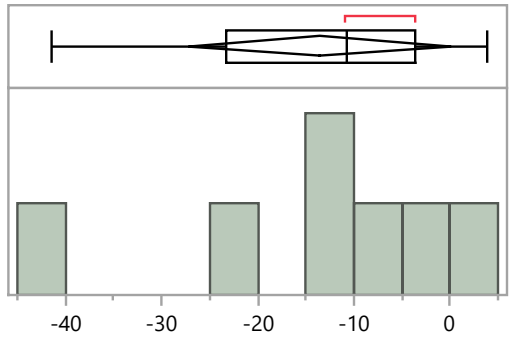


Quantiles		
100.0%	maximum	29.0
99.5%		29.0
97.5%		29.0
90.0%		29.0
75.0%	quartile	29.0
50.0%	median	29.0
25.0%	quartile	29.0
10.0%		29.0
2.5%		29.0
0.5%		29.0
0.0%	minimum	29.0

Summary Statistics	
Mean	29.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Nickel-63 Liquid Scintillation Counter

Bias

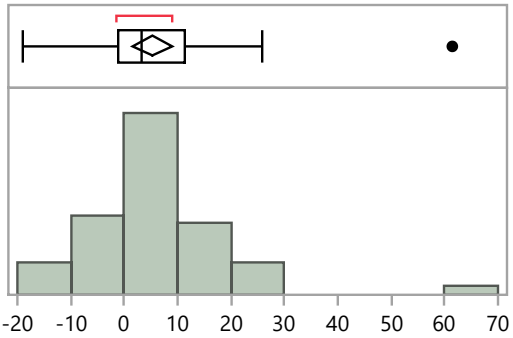


Quantiles		
100.0%	maximum	3.8
99.5%		3.8
97.5%		3.8
90.0%		3.8
75.0%	quartile	-3.7
50.0%	median	-10.7
25.0%	quartile	-23.3
10.0%		-41.5
2.5%		-41.5
0.5%		-41.5
0.0%	minimum	-41.5

Summary Statistics	
Mean	-13.6
Std Dev	14.8
Std Err Mean	5.6
Upper 95% Mean	0.1
Lower 95% Mean	-27.2
N	7.0

Distributions Analyte_Detection=Potassium-40 Gamma Spectrometry

Bias



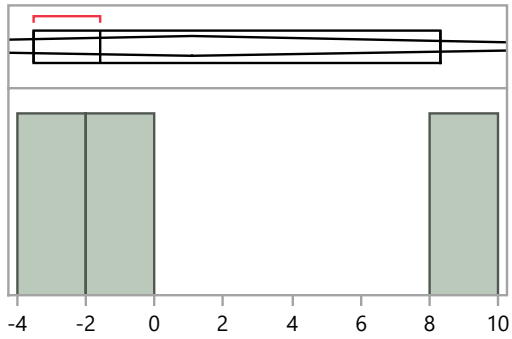
Quantiles		
100.0%	maximum	61.4
99.5%		61.4
97.5%		50.7
90.0%		20.8
75.0%	quartile	11.2
50.0%	median	3.3
25.0%	quartile	-1.1
10.0%		-8.8
2.5%		-18.8
0.5%		-18.9
0.0%	minimum	-18.9

Summary Statistics	
Mean	5.3
Std Dev	12.8
Std Err Mean	1.8
Upper 95% Mean	8.9
Lower 95% Mean	1.7
N	51.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Strontium-90 Alpha Spectrometry

Bias

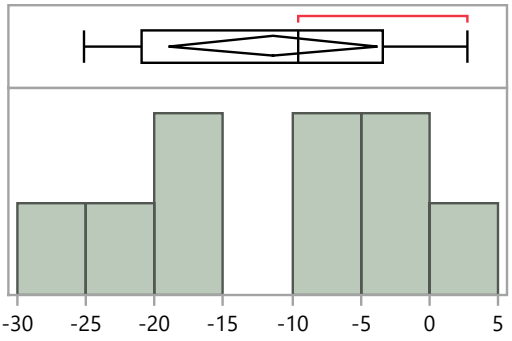


Quantiles		
100.0%	maximum	8.3
99.5%		8.3
97.5%		8.3
90.0%		8.3
75.0%	quartile	8.3
50.0%	median	-1.6
25.0%	quartile	-3.5
10.0%		-3.5
2.5%		-3.5
0.5%		-3.5
0.0%	minimum	-3.5

Summary Statistics	
Mean	1.1
Std Dev	6.3
Std Err Mean	3.7
Upper 95% Mean	16.8
Lower 95% Mean	-14.7
N	3.0

Distributions Analyte_Detection=Strontium-90 Gas Flow Proportional Counter

Bias

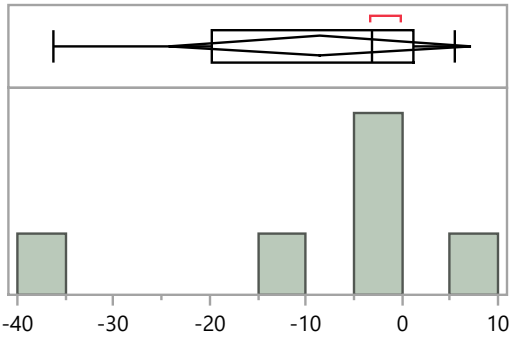


Quantiles		
100.0%	maximum	2.7
99.5%		2.7
97.5%		2.7
90.0%		2.7
75.0%	quartile	-3.5
50.0%	median	-9.5
25.0%	quartile	-21.0
10.0%		-25.1
2.5%		-25.1
0.5%		-25.1
0.0%	minimum	-25.1

Summary Statistics	
Mean	-11.4
Std Dev	9.8
Std Err Mean	3.3
Upper 95% Mean	-3.8
Lower 95% Mean	-18.9
N	9.0

Distributions Analyte_Detection=Strontium-90 Gross Alpha/Beta - 2 pi gas flow proportional counter

Bias



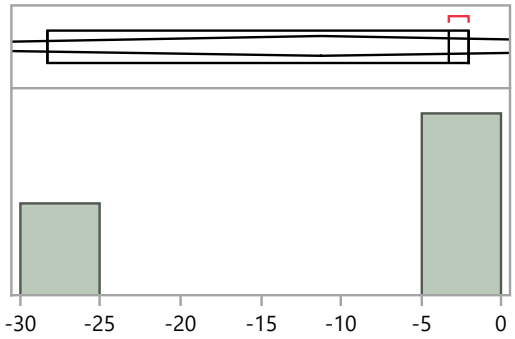
Quantiles		
100.0%	maximum	5.4
99.5%		5.4
97.5%		5.4
90.0%		5.4
75.0%	quartile	1.2
50.0%	median	-3.2
25.0%	quartile	-19.8
10.0%		-36.2
2.5%		-36.2
0.5%		-36.2
0.0%	minimum	-36.2

Summary Statistics	
Mean	-8.6
Std Dev	15.0
Std Err Mean	6.1
Upper 95% Mean	7.1
Lower 95% Mean	-24.3
N	6.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Strontium-90 Liquid Scintillation Counter

Bias

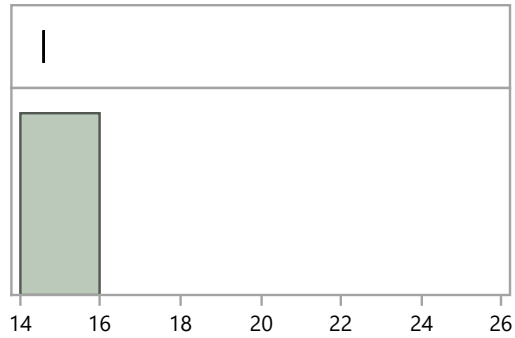


Quantiles		
100.0%	maximum	-2.0
99.5%		-2.0
97.5%		-2.0
90.0%		-2.0
75.0%	quartile	-2.0
50.0%	median	-3.3
25.0%	quartile	-28.3
10.0%		-28.3
2.5%		-28.3
0.5%		-28.3
0.0%	minimum	-28.3

Summary Statistics	
Mean	-11.2
Std Dev	14.8
Std Err Mean	8.6
Upper 95% Mean	25.6
Lower 95% Mean	-48.0
N	3.0

Distributions Analyte_Detection=Technetium-99 Gas Flow Proportional Counter

Bias

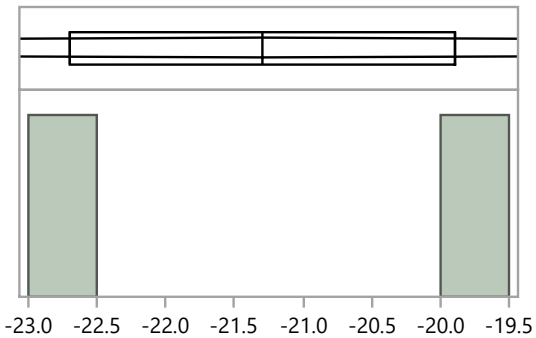


Quantiles		
100.0%	maximum	14.6
99.5%		14.6
97.5%		14.6
90.0%		14.6
75.0%	quartile	14.6
50.0%	median	14.6
25.0%	quartile	14.6
10.0%		14.6
2.5%		14.6
0.5%		14.6
0.0%	minimum	14.6

Summary Statistics	
Mean	14.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Technetium-99 Inductively Coupled Plasma Mass Spectrometry

Bias



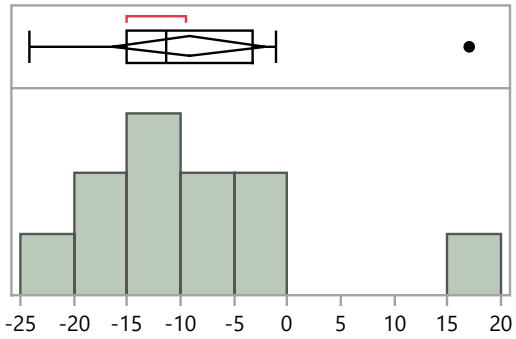
Quantiles		
100.0%	maximum	-19.9
99.5%		-19.9
97.5%		-19.9
90.0%		-19.9
75.0%	quartile	-19.9
50.0%	median	-21.3
25.0%	quartile	-22.7
10.0%		-22.7
2.5%		-22.7
0.5%		-22.7
0.0%	minimum	-22.7

Summary Statistics	
Mean	-21.3
Std Dev	2.0
Std Err Mean	1.4
Upper 95% Mean	-3.5
Lower 95% Mean	-39.1
N	2.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Technetium-99 Liquid Scintillation Counter

Bias

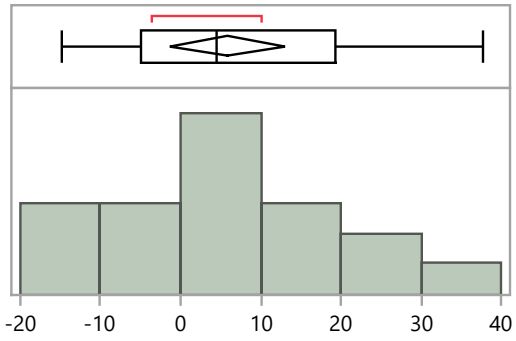


Quantiles		
100.0%	maximum	17.0
99.5%		17.0
97.5%		17.0
90.0%		13.4
75.0%	quartile	-3.2
50.0%	median	-11.4
25.0%	quartile	-15.1
10.0%		-22.6
2.5%		-24.1
0.5%		-24.1
0.0%	minimum	-24.1

Summary Statistics	
Mean	-9.2
Std Dev	10.7
Std Err Mean	3.2
Upper 95% Mean	-2.0
Lower 95% Mean	-16.4
N	11.0

Distributions Analyte_Detection=Thorium-228 Alpha Spectrometry

Bias

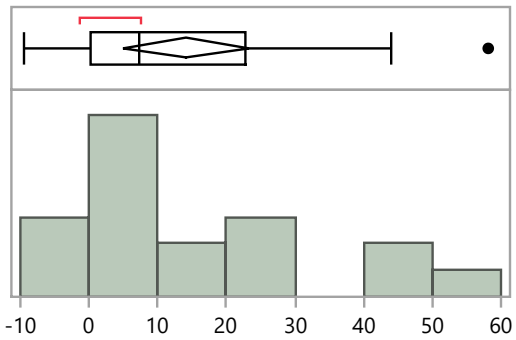


Quantiles		
100.0%	maximum	37.7
99.5%		37.7
97.5%		37.7
90.0%		25.4
75.0%	quartile	19.4
50.0%	median	4.6
25.0%	quartile	-5.0
10.0%		-12.5
2.5%		-14.9
0.5%		-14.9
0.0%	minimum	-14.9

Summary Statistics	
Mean	5.9
Std Dev	14.4
Std Err Mean	3.4
Upper 95% Mean	13.1
Lower 95% Mean	-1.3
N	18.0

Distributions Analyte_Detection=Thorium-230 Alpha Spectrometry

Bias



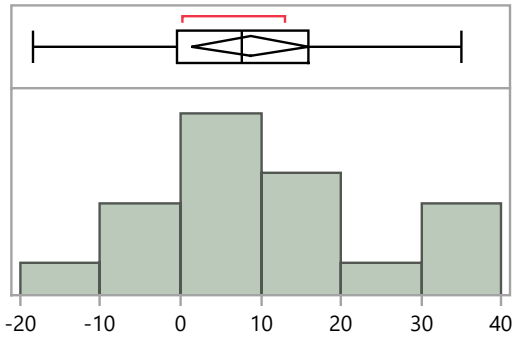
Quantiles		
100.0%	maximum	58.1
99.5%		58.1
97.5%		58.1
90.0%		45.3
75.0%	quartile	22.8
50.0%	median	7.4
25.0%	quartile	0.3
10.0%		-2.1
2.5%		-9.4
0.5%		-9.4
0.0%	minimum	-9.4

Summary Statistics	
Mean	14.1
Std Dev	18.2
Std Err Mean	4.3
Upper 95% Mean	23.2
Lower 95% Mean	5.1
N	18.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Thorium-232 Alpha Spectrometry

Bias

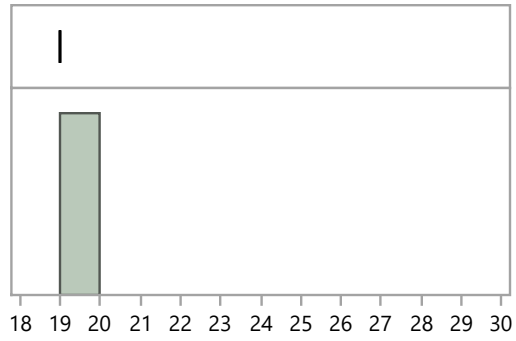


Quantiles		
100.0%	maximum	35.0
99.5%		35.0
97.5%		35.0
90.0%		34.5
75.0%	quartile	15.9
50.0%	median	7.8
25.0%	quartile	-0.4
10.0%		-8.6
2.5%		-18.3
0.5%		-18.3
0.0%	minimum	-18.3

Summary Statistics	
Mean	8.7
Std Dev	14.7
Std Err Mean	3.5
Upper 95% Mean	16.0
Lower 95% Mean	1.4
N	18.0

Distributions Analyte_Detection=Thorium-232 Gamma Spectrometry

Bias

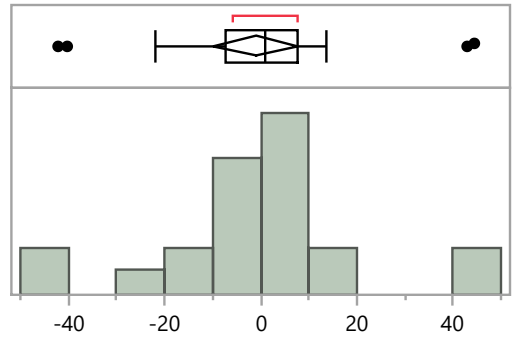


Quantiles		
100.0%	maximum	19.0
99.5%		19.0
97.5%		19.0
90.0%		19.0
75.0%	quartile	19.0
50.0%	median	19.0
25.0%	quartile	19.0
10.0%		19.0
2.5%		19.0
0.5%		19.0
0.0%	minimum	19.0

Summary Statistics	
Mean	19.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Uranium-234 Alpha Spectrometry

Bias



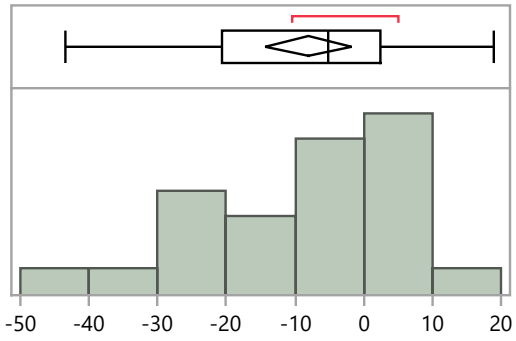
Quantiles		
100.0%	maximum	44.4
99.5%		44.4
97.5%		44.4
90.0%		31.2
75.0%	quartile	7.8
50.0%	median	0.8
25.0%	quartile	-7.4
10.0%		-32.9
2.5%		-42.1
0.5%		-42.1
0.0%	minimum	-42.1

Summary Statistics	
Mean	-1.0
Std Dev	20.2
Std Err Mean	4.2
Upper 95% Mean	7.7
Lower 95% Mean	-9.8
N	23.0

MaS53 Distribution by Detection Method

Distributions Analyte_Detection=Uranium-238 Alpha Spectrometry

Bias



Quantiles

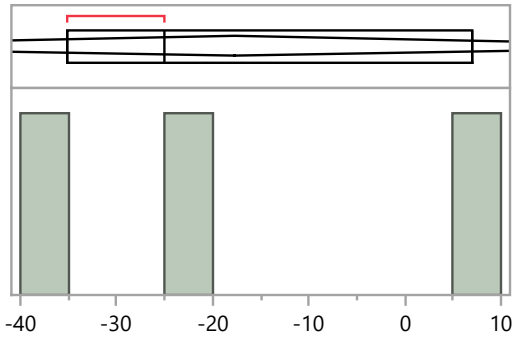
100.0%	maximum	19.0
99.5%		19.0
97.5%		19.0
90.0%		8.7
75.0%	quartile	2.4
50.0%	median	-5.3
25.0%	quartile	-20.6
10.0%		-29.7
2.5%		-43.4
0.5%		-43.4
0.0%	minimum	-43.4

Summary Statistics

Mean	-8.0
Std Dev	14.6
Std Err Mean	3.0
Upper 95% Mean	-1.7
Lower 95% Mean	-14.3
N	23.0

Distributions Analyte_Detection=Uranium-238 Gamma Spectrometry

Bias



Quantiles

100.0%	maximum	6.9
99.5%		6.9
97.5%		6.9
90.0%		6.9
75.0%	quartile	6.9
50.0%	median	-25.0
25.0%	quartile	-35.1
10.0%		-35.1
2.5%		-35.1
0.5%		-35.1
0.0%	minimum	-35.1

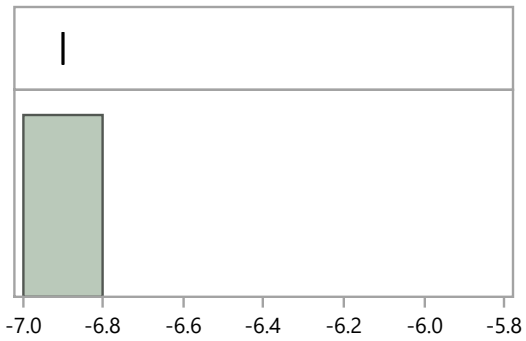
Summary Statistics

Mean	-17.7
Std Dev	21.9
Std Err Mean	12.7
Upper 95% Mean	36.7
Lower 95% Mean	-72.2
N	3.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Cesium-134 Acid dissolution with hydrofluoric acid

Bias

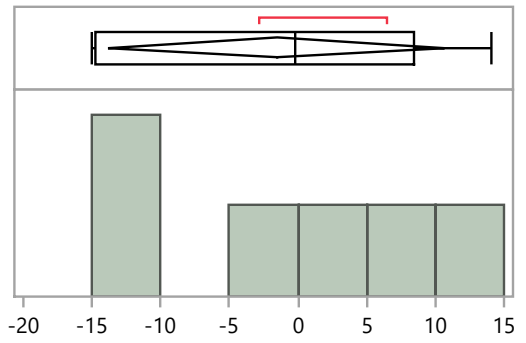


Quantiles		
100.0%	maximum	-6.9
99.5%		-6.9
97.5%		-6.9
90.0%		-6.9
75.0%	quartile	-6.9
50.0%	median	-6.9
25.0%	quartile	-6.9
10.0%		-6.9
2.5%		-6.9
0.5%		-6.9
0.0%	minimum	-6.9

Summary Statistics	
Mean	-6.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-134 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias

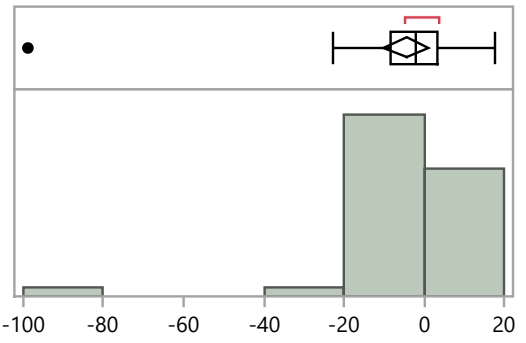


Quantiles		
100.0%	maximum	14.0
99.5%		14.0
97.5%		14.0
90.0%		14.0
75.0%	quartile	8.4
50.0%	median	-0.1
25.0%	quartile	-14.8
10.0%		-15.0
2.5%		-15.0
0.5%		-15.0
0.0%	minimum	-15.0

Summary Statistics	
Mean	-1.6
Std Dev	11.6
Std Err Mean	4.8
Upper 95% Mean	10.6
Lower 95% Mean	-13.8
N	6.0

Distributions Analyte_Method=Cesium-134 No preparation - analyzed as received

Bias



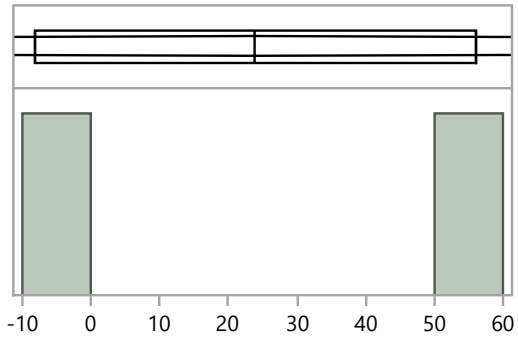
Quantiles		
100.0%	maximum	17.8
99.5%		17.8
97.5%		17.5
90.0%		10.1
75.0%	quartile	3.5
50.0%	median	-2.2
25.0%	quartile	-8.6
10.0%		-16.5
2.5%		-95.0
0.5%		-98.8
0.0%	minimum	-98.8

Summary Statistics	
Mean	-4.5
Std Dev	17.6
Std Err Mean	2.7
Upper 95% Mean	1.0
Lower 95% Mean	-10.1
N	41.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Cesium-134 Other

Bias

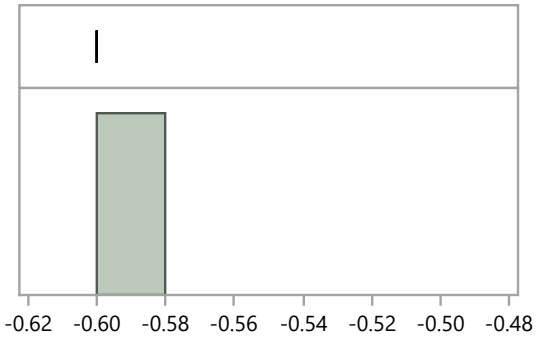


Quantiles		
100.0%	maximum	55.9
99.5%		55.9
97.5%		55.9
90.0%		55.9
75.0%	quartile	55.9
50.0%	median	24.0
25.0%	quartile	-8.0
10.0%		-8.0
2.5%		-8.0
0.5%		-8.0
0.0%	minimum	-8.0

Summary Statistics	
Mean	24.0
Std Dev	45.2
Std Err Mean	32.0
Upper 95% Mean	429.9
Lower 95% Mean	-382.0
N	2.0

Distributions Analyte_Method=Cesium-137 Acid dissolution with hydrofluoric acid

Bias

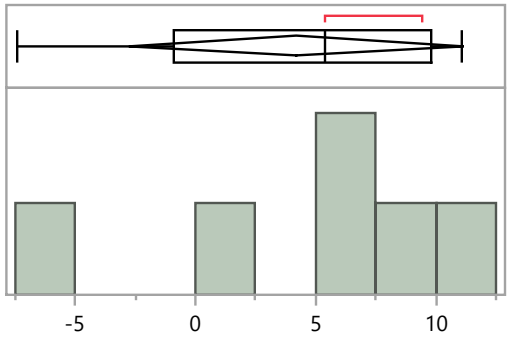


Quantiles		
100.0%	maximum	-0.6
99.5%		-0.6
97.5%		-0.6
90.0%		-0.6
75.0%	quartile	-0.6
50.0%	median	-0.6
25.0%	quartile	-0.6
10.0%		-0.6
2.5%		-0.6
0.5%		-0.6
0.0%	minimum	-0.6

Summary Statistics	
Mean	-0.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-137 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias



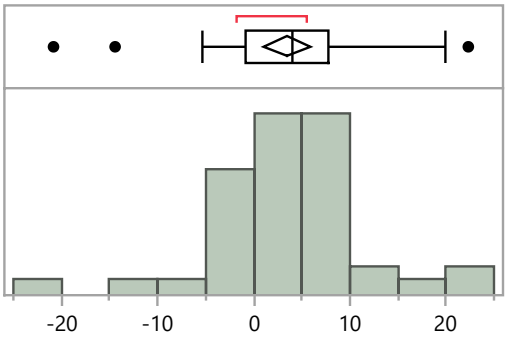
Quantiles		
100.0%	maximum	11.1
99.5%		11.1
97.5%		11.1
90.0%		11.1
75.0%	quartile	9.8
50.0%	median	5.4
25.0%	quartile	-0.9
10.0%		-7.4
2.5%		-7.4
0.5%		-7.4
0.0%	minimum	-7.4

Summary Statistics	
Mean	4.2
Std Dev	6.6
Std Err Mean	2.7
Upper 95% Mean	11.2
Lower 95% Mean	-2.8
N	6.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Cesium-137 No preparation - analyzed as received

Bias

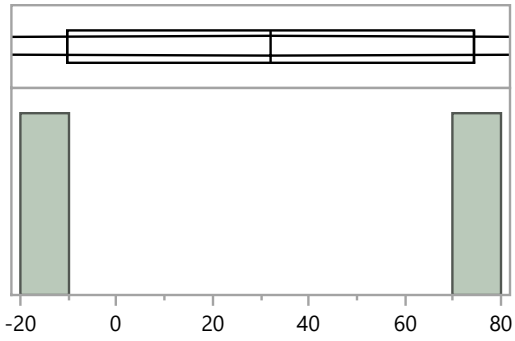


Quantiles		
100.0%	maximum	22.3
99.5%		22.3
97.5%		22.1
90.0%		11.9
75.0%	quartile	7.7
50.0%	median	4.1
25.0%	quartile	-0.9
10.0%		-4.8
2.5%		-20.2
0.5%		-20.8
0.0%	minimum	-20.8

Summary Statistics	
Mean	3.5
Std Dev	7.7
Std Err Mean	1.2
Upper 95% Mean	5.9
Lower 95% Mean	1.1
N	43.0

Distributions Analyte_Method=Cesium-137 Other

Bias

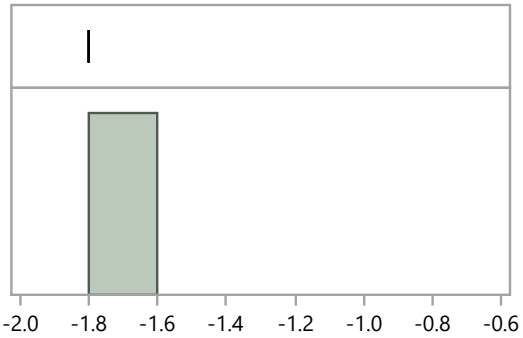


Quantiles		
100.0%	maximum	74.3
99.5%		74.3
97.5%		74.3
90.0%		74.3
75.0%	quartile	74.3
50.0%	median	32.1
25.0%	quartile	-10.1
10.0%		-10.1
2.5%		-10.1
0.5%		-10.1
0.0%	minimum	-10.1

Summary Statistics	
Mean	32.1
Std Dev	59.7
Std Err Mean	42.2
Upper 95% Mean	568.3
Lower 95% Mean	-504.1
N	2.0

Distributions Analyte_Method=Cobalt-60 Acid dissolution with hydrofluoric acid

Bias



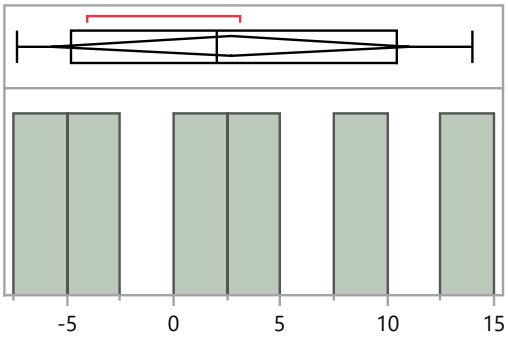
Quantiles		
100.0%	maximum	-1.8
99.5%		-1.8
97.5%		-1.8
90.0%		-1.8
75.0%	quartile	-1.8
50.0%	median	-1.8
25.0%	quartile	-1.8
10.0%		-1.8
2.5%		-1.8
0.5%		-1.8
0.0%	minimum	-1.8

Summary Statistics	
Mean	-1.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Cobalt-60 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias

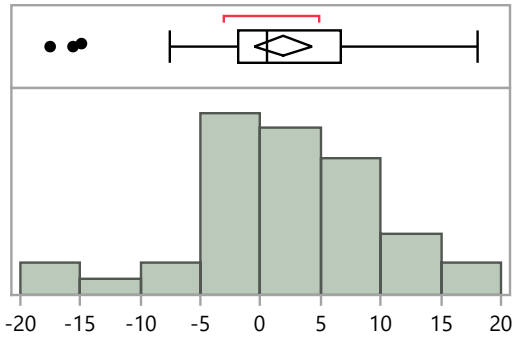


Quantiles		
100.0%	maximum	14.0
99.5%		14.0
97.5%		14.0
90.0%		14.0
75.0%	quartile	10.5
50.0%	median	2.0
25.0%	quartile	-4.8
10.0%		-7.3
2.5%		-7.3
0.5%		-7.3
0.0%	minimum	-7.3

Summary Statistics	
Mean	2.7
Std Dev	8.0
Std Err Mean	3.3
Upper 95% Mean	11.1
Lower 95% Mean	-5.7
N	6.0

Distributions Analyte_Method=Cobalt-60 No preparation - analyzed as received

Bias

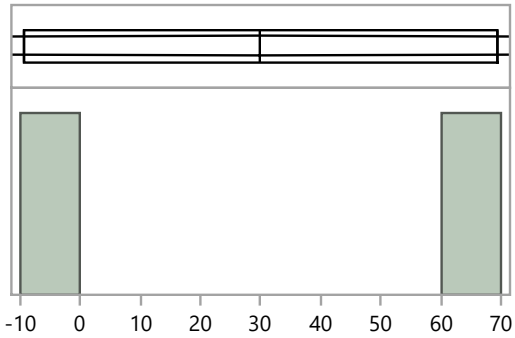


Quantiles		
100.0%	maximum	18.1
99.5%		18.1
97.5%		17.9
90.0%		13.4
75.0%	quartile	6.6
50.0%	median	0.5
25.0%	quartile	-1.8
10.0%		-7.4
2.5%		-17.3
0.5%		-17.5
0.0%	minimum	-17.5

Summary Statistics	
Mean	1.9
Std Dev	7.8
Std Err Mean	1.2
Upper 95% Mean	4.3
Lower 95% Mean	-0.5
N	43.0

Distributions Analyte_Method=Cobalt-60 Other

Bias



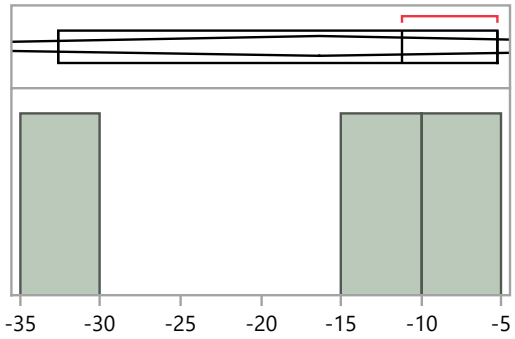
Quantiles		
100.0%	maximum	69.3
99.5%		69.3
97.5%		69.3
90.0%		69.3
75.0%	quartile	69.3
50.0%	median	30.0
25.0%	quartile	-9.4
10.0%		-9.4
2.5%		-9.4
0.5%		-9.4
0.0%	minimum	-9.4

Summary Statistics	
Mean	30.0
Std Dev	55.6
Std Err Mean	39.4
Upper 95% Mean	529.9
Lower 95% Mean	-470.0
N	2.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Iron-55 Acid dissolution with hydrofluoric acid

Bias

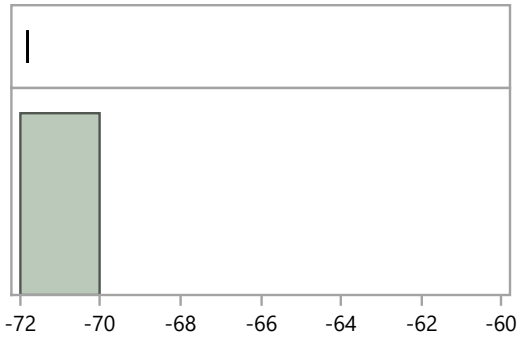


Quantiles		
100.0%	maximum	-5.2
99.5%		-5.2
97.5%		-5.2
90.0%		-5.2
75.0%	quartile	-5.2
50.0%	median	-11.2
25.0%	quartile	-32.6
10.0%		-32.6
2.5%		-32.6
0.5%		-32.6
0.0%	minimum	-32.6

Summary Statistics	
Mean	-16.3
Std Dev	14.4
Std Err Mean	8.3
Upper 95% Mean	19.4
Lower 95% Mean	-52.1
N	3.0

Distributions Analyte_Method=Iron-55 Coprecipitation, acidified

Bias

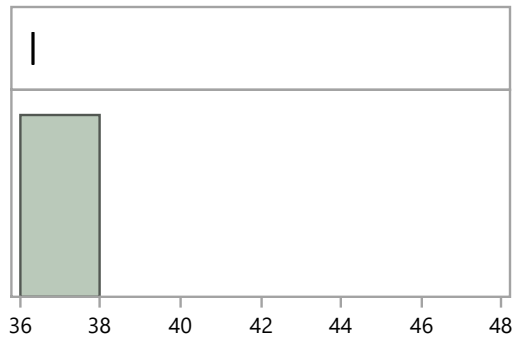


Quantiles		
100.0%	maximum	-71.8
99.5%		-71.8
97.5%		-71.8
90.0%		-71.8
75.0%	quartile	-71.8
50.0%	median	-71.8
25.0%	quartile	-71.8
10.0%		-71.8
2.5%		-71.8
0.5%		-71.8
0.0%	minimum	-71.8

Summary Statistics	
Mean	-71.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Iron-55 Total dissolution by fusion

Bias



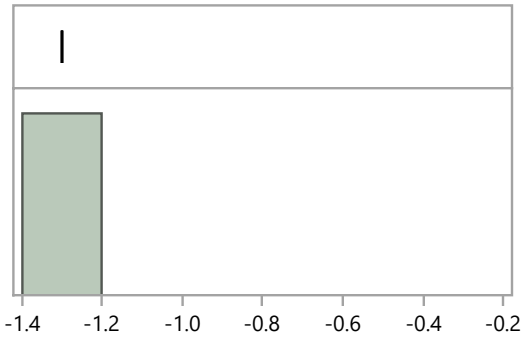
Quantiles		
100.0%	maximum	36.3
99.5%		36.3
97.5%		36.3
90.0%		36.3
75.0%	quartile	36.3
50.0%	median	36.3
25.0%	quartile	36.3
10.0%		36.3
2.5%		36.3
0.5%		36.3
0.0%	minimum	36.3

Summary Statistics	
Mean	36.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Manganese-54 Acid dissolution with hydrofluoric acid

Bias

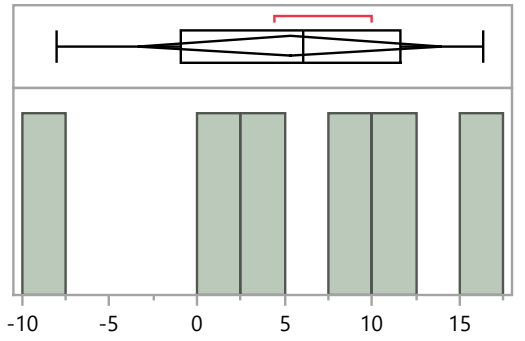


Quantiles		
100.0%	maximum	-1.3
99.5%		-1.3
97.5%		-1.3
90.0%		-1.3
75.0%	quartile	-1.3
50.0%	median	-1.3
25.0%	quartile	-1.3
10.0%		-1.3
2.5%		-1.3
0.5%		-1.3
0.0%	minimum	-1.3

Summary Statistics	
Mean	-1.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Manganese-54 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias

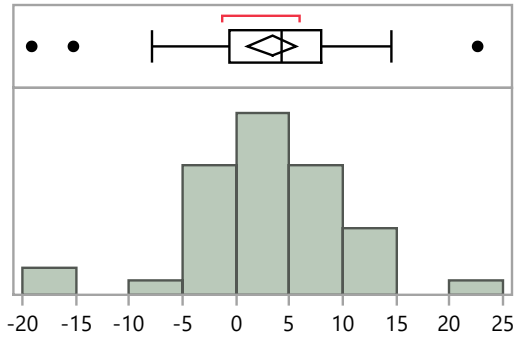


Quantiles		
100.0%	maximum	16.3
99.5%		16.3
97.5%		16.3
90.0%		16.3
75.0%	quartile	11.6
50.0%	median	6.1
25.0%	quartile	-1.0
10.0%		-8.0
2.5%		-8.0
0.5%		-8.0
0.0%	minimum	-8.0

Summary Statistics	
Mean	5.3
Std Dev	8.3
Std Err Mean	3.4
Upper 95% Mean	14.0
Lower 95% Mean	-3.4
N	6.0

Distributions Analyte_Method=Manganese-54 No preparation - analyzed as received

Bias



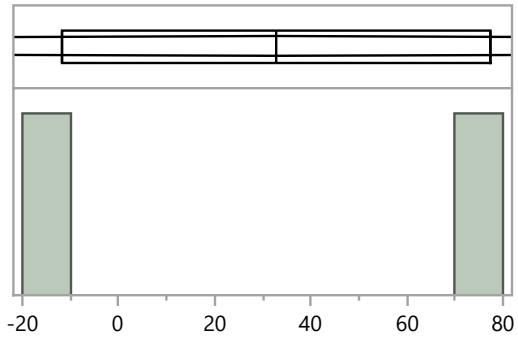
Quantiles		
100.0%	maximum	22.6
99.5%		22.6
97.5%		21.8
90.0%		13.1
75.0%	quartile	8.0
50.0%	median	4.2
25.0%	quartile	-0.6
10.0%		-3.8
2.5%		-18.7
0.5%		-19.1
0.0%	minimum	-19.1

Summary Statistics	
Mean	3.4
Std Dev	7.5
Std Err Mean	1.1
Upper 95% Mean	5.7
Lower 95% Mean	1.1
N	43.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Manganese-54 Other

Bias

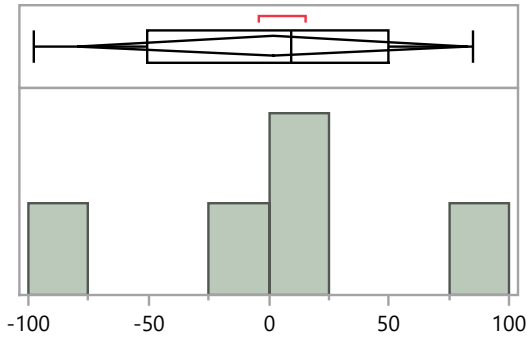


Quantiles		
100.0%	maximum	77.3
99.5%		77.3
97.5%		77.3
90.0%		77.3
75.0%	quartile	77.3
50.0%	median	32.8
25.0%	quartile	-11.7
10.0%		-11.7
2.5%		-11.7
0.5%		-11.7
0.0%	minimum	-11.7

Summary Statistics	
Mean	32.8
Std Dev	62.9
Std Err Mean	44.5
Upper 95% Mean	598.2
Lower 95% Mean	-532.6
N	2.0

Distributions Analyte_Method=Neptunium-237 Acid dissolution with hydrofluoric acid

Bias

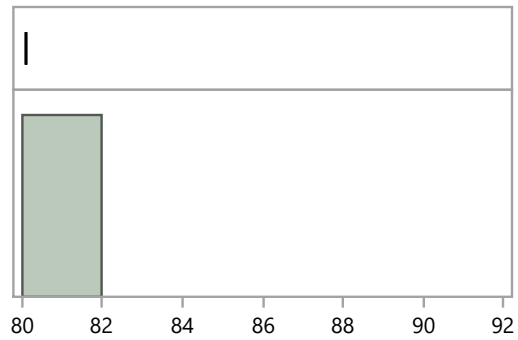


Quantiles		
100.0%	maximum	84.7
99.5%		84.7
97.5%		84.7
90.0%		84.7
75.0%	quartile	50.1
50.0%	median	9.5
25.0%	quartile	-50.8
10.0%		-97.5
2.5%		-97.5
0.5%		-97.5
0.0%	minimum	-97.5

Summary Statistics	
Mean	1.6
Std Dev	65.2
Std Err Mean	29.2
Upper 95% Mean	82.6
Lower 95% Mean	-79.4
N	5.0

Distributions Analyte_Method=Neptunium-237 No preparation - analyzed as received

Bias



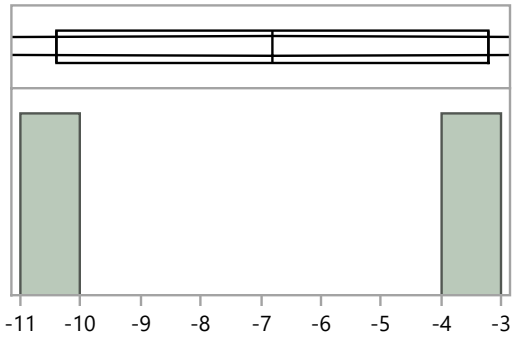
Quantiles		
100.0%	maximum	80.1
99.5%		80.1
97.5%		80.1
90.0%		80.1
75.0%	quartile	80.1
50.0%	median	80.1
25.0%	quartile	80.1
10.0%		80.1
2.5%		80.1
0.5%		80.1
0.0%	minimum	80.1

Summary Statistics	
Mean	80.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Neptunium-237 Other

Bias

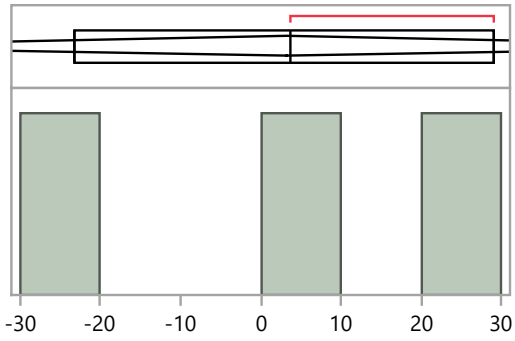


Quantiles		
100.0%	maximum	-3.2
99.5%		-3.2
97.5%		-3.2
90.0%		-3.2
75.0%	quartile	-3.2
50.0%	median	-6.8
25.0%	quartile	-10.4
10.0%		-10.4
2.5%		-10.4
0.5%		-10.4
0.0%	minimum	-10.4

Summary Statistics	
Mean	-6.8
Std Dev	5.1
Std Err Mean	3.6
Upper 95% Mean	38.9
Lower 95% Mean	-52.5
N	2.0

Distributions Analyte_Method=Nickel-63 Acid dissolution with hydrofluoric acid

Bias

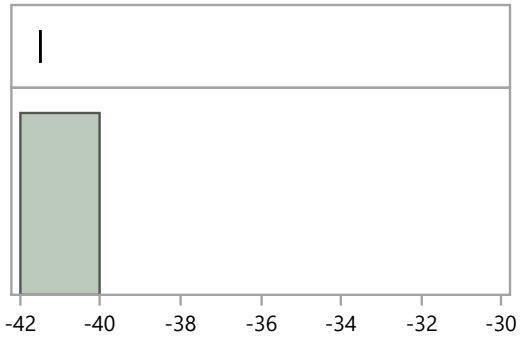


Quantiles		
100.0%	maximum	29.0
99.5%		29.0
97.5%		29.0
90.0%		29.0
75.0%	quartile	29.0
50.0%	median	3.8
25.0%	quartile	-23.3
10.0%		-23.3
2.5%		-23.3
0.5%		-23.3
0.0%	minimum	-23.3

Summary Statistics	
Mean	3.2
Std Dev	26.2
Std Err Mean	15.1
Upper 95% Mean	68.1
Lower 95% Mean	-61.8
N	3.0

Distributions Analyte_Method=Nickel-63 Acid leaching without hydrofluoric acid

Bias



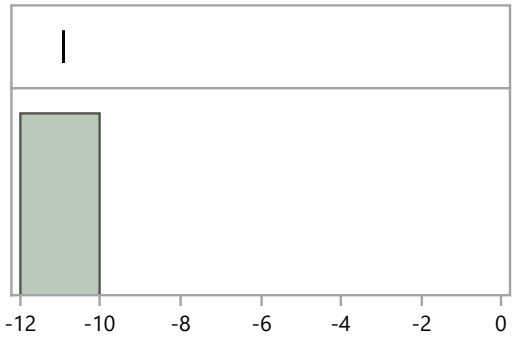
Quantiles		
100.0%	maximum	-41.5
99.5%		-41.5
97.5%		-41.5
90.0%		-41.5
75.0%	quartile	-41.5
50.0%	median	-41.5
25.0%	quartile	-41.5
10.0%		-41.5
2.5%		-41.5
0.5%		-41.5
0.0%	minimum	-41.5

Summary Statistics	
Mean	-41.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Nickel-63 Coprecipitation, acidified

Bias

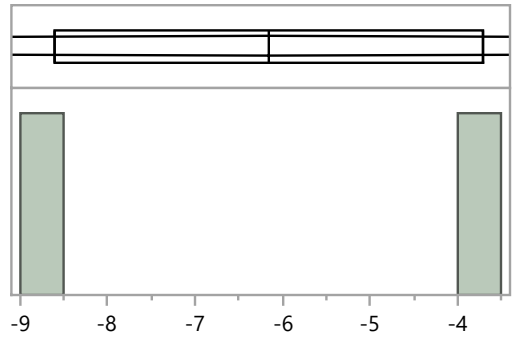


Quantiles		
100.0%	maximum	-10.9
99.5%		-10.9
97.5%		-10.9
90.0%		-10.9
75.0%	quartile	-10.9
50.0%	median	-10.9
25.0%	quartile	-10.9
10.0%		-10.9
2.5%		-10.9
0.5%		-10.9
0.0%	minimum	-10.9

Summary Statistics	
Mean	-10.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Nickel-63 Other

Bias

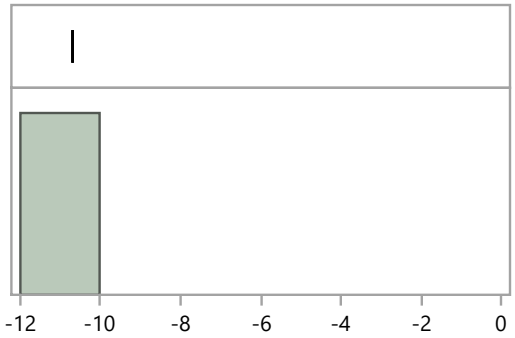


Quantiles		
100.0%	maximum	-3.7
99.5%		-3.7
97.5%		-3.7
90.0%		-3.7
75.0%	quartile	-3.7
50.0%	median	-6.2
25.0%	quartile	-8.6
10.0%		-8.6
2.5%		-8.6
0.5%		-8.6
0.0%	minimum	-8.6

Summary Statistics	
Mean	-6.2
Std Dev	3.5
Std Err Mean	2.5
Upper 95% Mean	25.0
Lower 95% Mean	-37.3
N	2.0

Distributions Analyte_Method=Nickel-63 Total dissolution by fusion

Bias



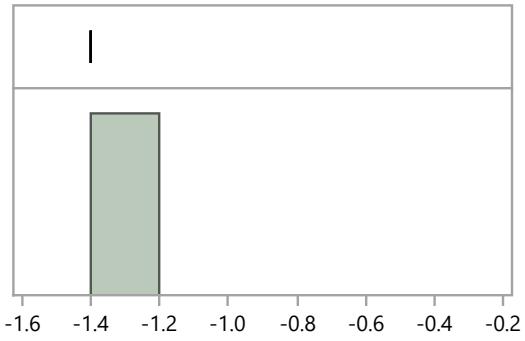
Quantiles		
100.0%	maximum	-10.7
99.5%		-10.7
97.5%		-10.7
90.0%		-10.7
75.0%	quartile	-10.7
50.0%	median	-10.7
25.0%	quartile	-10.7
10.0%		-10.7
2.5%		-10.7
0.5%		-10.7
0.0%	minimum	-10.7

Summary Statistics	
Mean	-10.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Potassium-40 Acid dissolution with hydrofluoric acid

Bias

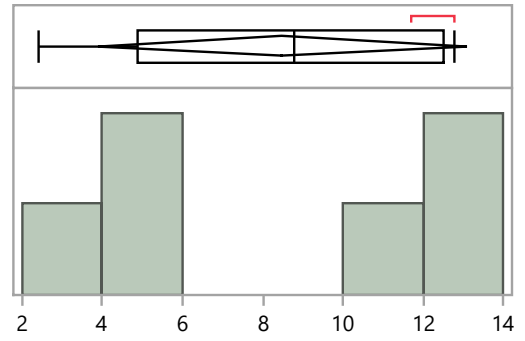


Quantiles		
100.0%	maximum	-1.4
99.5%		-1.4
97.5%		-1.4
90.0%		-1.4
75.0%	quartile	-1.4
50.0%	median	-1.4
25.0%	quartile	-1.4
10.0%		-1.4
2.5%		-1.4
0.5%		-1.4
0.0%	minimum	-1.4

Summary Statistics	
Mean	-1.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Potassium-40 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias

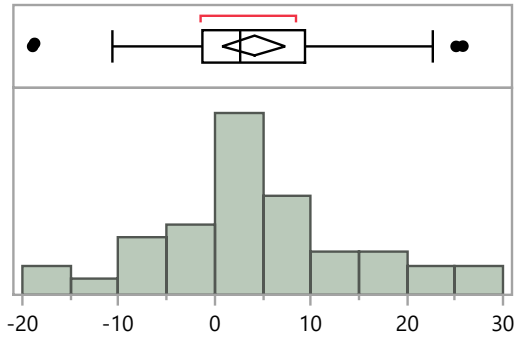


Quantiles		
100.0%	maximum	12.8
99.5%		12.8
97.5%		12.8
90.0%		12.8
75.0%	quartile	12.5
50.0%	median	8.8
25.0%	quartile	4.9
10.0%		2.4
2.5%		2.4
0.5%		2.4
0.0%	minimum	2.4

Summary Statistics	
Mean	8.5
Std Dev	4.4
Std Err Mean	1.8
Upper 95% Mean	13.1
Lower 95% Mean	3.9
N	6.0

Distributions Analyte_Method=Potassium-40 No preparation - analyzed as received

Bias



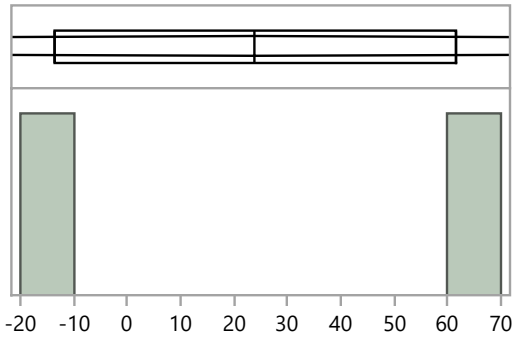
Quantiles		
100.0%	maximum	25.8
99.5%		25.8
97.5%		25.7
90.0%		20.4
75.0%	quartile	9.3
50.0%	median	2.6
25.0%	quartile	-1.2
10.0%		-8.5
2.5%		-18.9
0.5%		-18.9
0.0%	minimum	-18.9

Summary Statistics	
Mean	4.1
Std Dev	10.3
Std Err Mean	1.6
Upper 95% Mean	7.3
Lower 95% Mean	0.9
N	42.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Potassium-40 Other

Bias

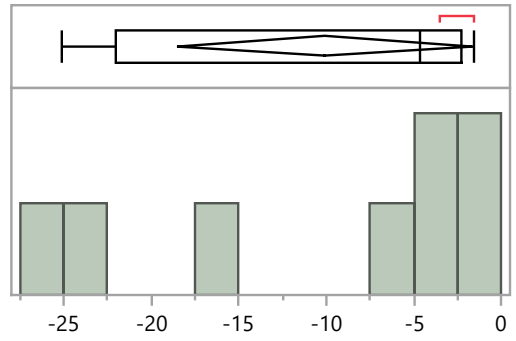


Quantiles		
100.0%	maximum	61.4
99.5%		61.4
97.5%		61.4
90.0%		61.4
75.0%	quartile	61.4
50.0%	median	23.9
25.0%	quartile	-13.6
10.0%		-13.6
2.5%		-13.6
0.5%		-13.6
0.0%	minimum	-13.6

Summary Statistics	
Mean	23.9
Std Dev	53.0
Std Err Mean	37.5
Upper 95% Mean	500.4
Lower 95% Mean	-452.6
N	2.0

Distributions Analyte_Method=Strontium-90 Acid dissolution with hydrofluoric acid

Bias

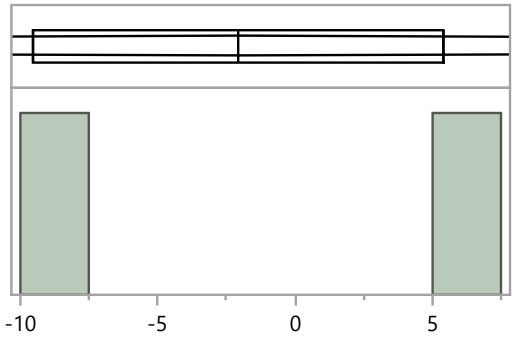


Quantiles		
100.0%	maximum	-1.6
99.5%		-1.6
97.5%		-1.6
90.0%		-1.6
75.0%	quartile	-2.3
50.0%	median	-4.6
25.0%	quartile	-22.1
10.0%		-25.1
2.5%		-25.1
0.5%		-25.1
0.0%	minimum	-25.1

Summary Statistics	
Mean	-10.1
Std Dev	10.0
Std Err Mean	3.6
Upper 95% Mean	-1.7
Lower 95% Mean	-18.5
N	8.0

Distributions Analyte_Method=Strontium-90 Acid leaching without hydrofluoric acid

Bias



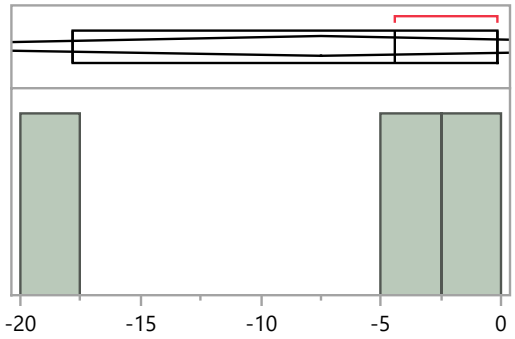
Quantiles		
100.0%	maximum	5.4
99.5%		5.4
97.5%		5.4
90.0%		5.4
75.0%	quartile	5.4
50.0%	median	-2.1
25.0%	quartile	-9.5
10.0%		-9.5
2.5%		-9.5
0.5%		-9.5
0.0%	minimum	-9.5

Summary Statistics	
Mean	-2.1
Std Dev	10.5
Std Err Mean	7.5
Upper 95% Mean	92.6
Lower 95% Mean	-96.7
N	2.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Strontium-90 EPA 905, Radioactive Strontium, 600/4-80-032

Bias

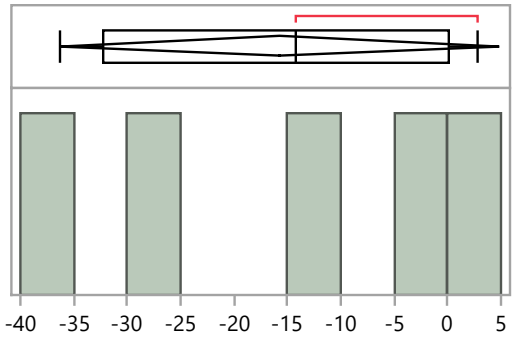


Quantiles		
100.0%	maximum	-0.2
99.5%		-0.2
97.5%		-0.2
90.0%		-0.2
75.0%	quartile	-0.2
50.0%	median	-4.4
25.0%	quartile	-17.8
10.0%		-17.8
2.5%		-17.8
0.5%		-17.8
0.0%	minimum	-17.8

Summary Statistics	
Mean	-7.5
Std Dev	9.2
Std Err Mean	5.3
Upper 95% Mean	15.4
Lower 95% Mean	-30.3
N	3.0

Distributions Analyte_Method=Strontium-90 Other

Bias

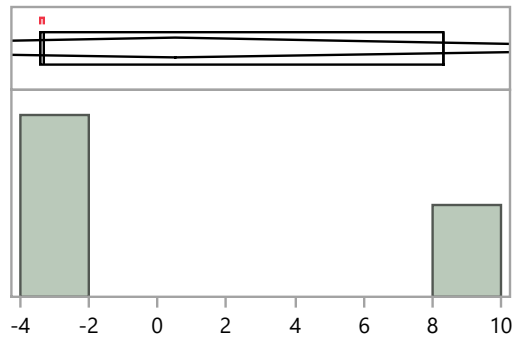


Quantiles		
100.0%	maximum	2.7
99.5%		2.7
97.5%		2.7
90.0%		2.7
75.0%	quartile	0.1
50.0%	median	-14.3
25.0%	quartile	-32.3
10.0%		-36.2
2.5%		-36.2
0.5%		-36.2
0.0%	minimum	-36.2

Summary Statistics	
Mean	-15.7
Std Dev	16.5
Std Err Mean	7.4
Upper 95% Mean	4.8
Lower 95% Mean	-36.3
N	5.0

Distributions Analyte_Method=Strontium-90 Total dissolution by fusion

Bias



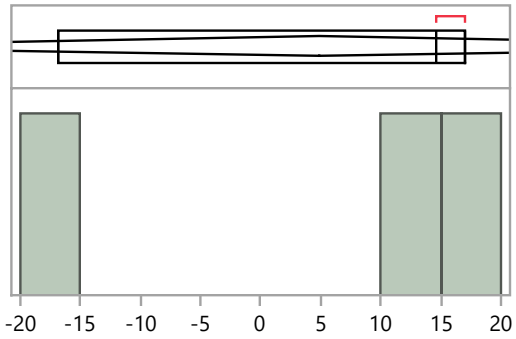
Quantiles		
100.0%	maximum	8.3
99.5%		8.3
97.5%		8.3
90.0%		8.3
75.0%	quartile	8.3
50.0%	median	-3.3
25.0%	quartile	-3.4
10.0%		-3.4
2.5%		-3.4
0.5%		-3.4
0.0%	minimum	-3.4

Summary Statistics	
Mean	0.5
Std Dev	6.7
Std Err Mean	3.9
Upper 95% Mean	17.2
Lower 95% Mean	-16.2
N	3.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Technetium-99 Acid dissolution with hydrofluoric acid

Bias

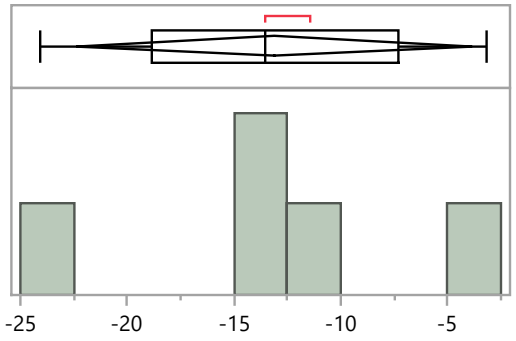


Quantiles		
100.0%	maximum	17.0
99.5%		17.0
97.5%		17.0
90.0%		17.0
75.0%	quartile	17.0
50.0%	median	14.6
25.0%	quartile	-16.8
10.0%		-16.8
2.5%		-16.8
0.5%		-16.8
0.0%	minimum	-16.8

Summary Statistics	
Mean	4.9
Std Dev	18.9
Std Err Mean	10.9
Upper 95% Mean	51.8
Lower 95% Mean	-41.9
N	3.0

Distributions Analyte_Method=Technetium-99 Acid leaching without hydrofluoric acid

Bias

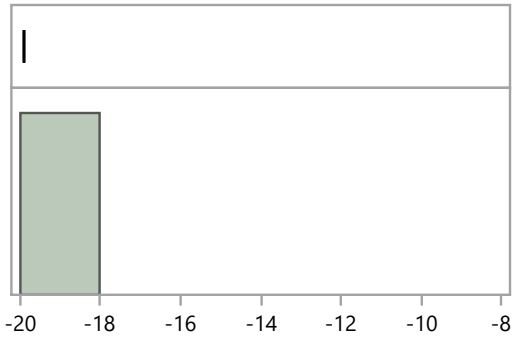


Quantiles		
100.0%	maximum	-3.2
99.5%		-3.2
97.5%		-3.2
90.0%		-3.2
75.0%	quartile	-7.3
50.0%	median	-13.5
25.0%	quartile	-18.8
10.0%		-24.1
2.5%		-24.1
0.5%		-24.1
0.0%	minimum	-24.1

Summary Statistics	
Mean	-13.1
Std Dev	7.5
Std Err Mean	3.3
Upper 95% Mean	-3.9
Lower 95% Mean	-22.4
N	5.0

Distributions Analyte_Method=Technetium-99 Evaporation, acidified

Bias



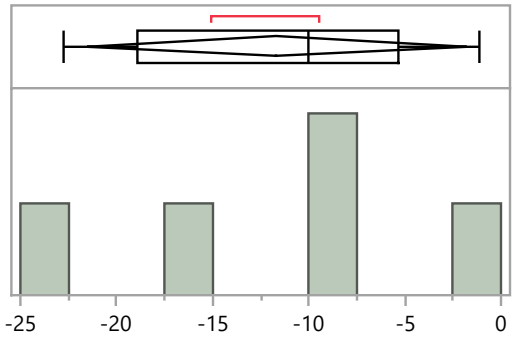
Quantiles		
100.0%	maximum	-19.9
99.5%		-19.9
97.5%		-19.9
90.0%		-19.9
75.0%	quartile	-19.9
50.0%	median	-19.9
25.0%	quartile	-19.9
10.0%		-19.9
2.5%		-19.9
0.5%		-19.9
0.0%	minimum	-19.9

Summary Statistics	
Mean	-19.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Technetium-99 Other

Bias

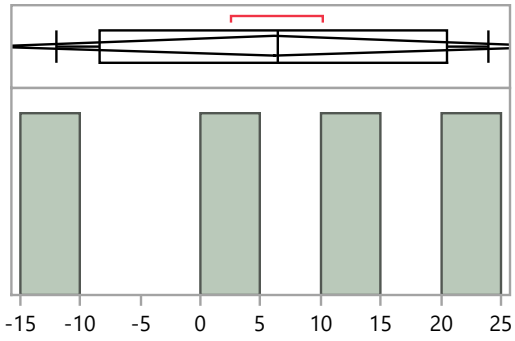


Quantiles		
100.0%	maximum	-1.1
99.5%		-1.1
97.5%		-1.1
90.0%		-1.1
75.0%	quartile	-5.3
50.0%	median	-10.0
25.0%	quartile	-18.9
10.0%		-22.7
2.5%		-22.7
0.5%		-22.7
0.0%	minimum	-22.7

Summary Statistics	
Mean	-11.7
Std Dev	7.9
Std Err Mean	3.6
Upper 95% Mean	-1.8
Lower 95% Mean	-21.5
N	5.0

Distributions Analyte_Method=Thorium-228 Acid dissolution with hydrofluoric acid

Bias

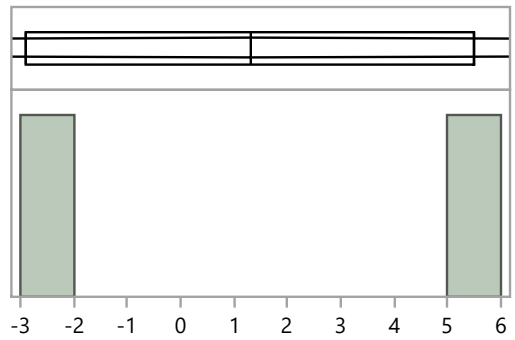


Quantiles		
100.0%	maximum	24.0
99.5%		24.0
97.5%		24.0
90.0%		24.0
75.0%	quartile	20.5
50.0%	median	6.4
25.0%	quartile	-8.4
10.0%		-12.0
2.5%		-12.0
0.5%		-12.0
0.0%	minimum	-12.0

Summary Statistics	
Mean	6.2
Std Dev	15.0
Std Err Mean	7.5
Upper 95% Mean	30.1
Lower 95% Mean	-17.7
N	4.0

Distributions Analyte_Method=Thorium-228 Acid leaching without hydrofluoric acid

Bias



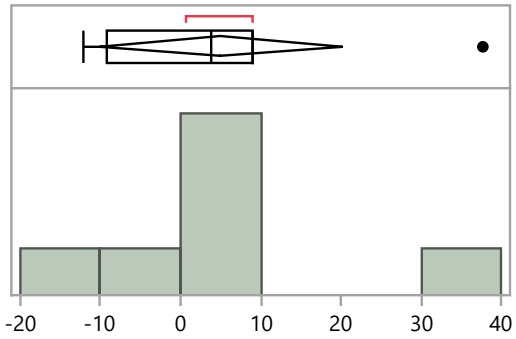
Quantiles		
100.0%	maximum	5.5
99.5%		5.5
97.5%		5.5
90.0%		5.5
75.0%	quartile	5.5
50.0%	median	1.3
25.0%	quartile	-2.9
10.0%		-2.9
2.5%		-2.9
0.5%		-2.9
0.0%	minimum	-2.9

Summary Statistics	
Mean	1.3
Std Dev	5.9
Std Err Mean	4.2
Upper 95% Mean	54.7
Lower 95% Mean	-52.1
N	2.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Thorium-228 Other

Bias

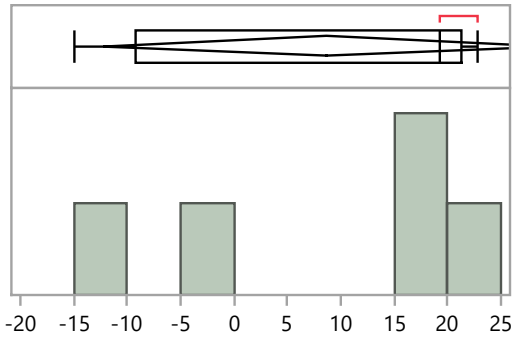


Quantiles		
100.0%	maximum	37.7
99.5%		37.7
97.5%		37.7
90.0%		37.7
75.0%	quartile	9.0
50.0%	median	3.8
25.0%	quartile	-9.3
10.0%		-12.2
2.5%		-12.2
0.5%		-12.2
0.0%	minimum	-12.2

Summary Statistics	
Mean	5.0
Std Dev	16.4
Std Err Mean	6.2
Upper 95% Mean	20.1
Lower 95% Mean	-10.1
N	7.0

Distributions Analyte_Method=Thorium-228 Total dissolution by fusion

Bias

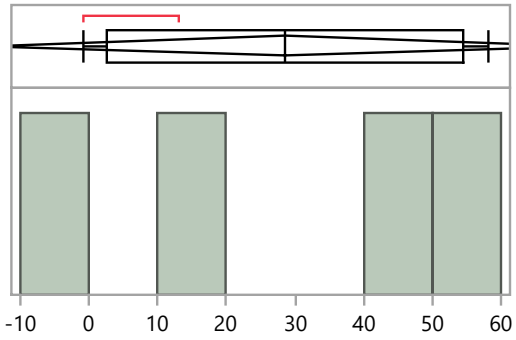


Quantiles		
100.0%	maximum	22.8
99.5%		22.8
97.5%		22.8
90.0%		22.8
75.0%	quartile	21.4
50.0%	median	19.2
25.0%	quartile	-9.3
10.0%		-14.9
2.5%		-14.9
0.5%		-14.9
0.0%	minimum	-14.9

Summary Statistics	
Mean	8.7
Std Dev	16.9
Std Err Mean	7.6
Upper 95% Mean	29.7
Lower 95% Mean	-12.3
N	5.0

Distributions Analyte_Method=Thorium-230 Acid dissolution with hydrofluoric acid

Bias



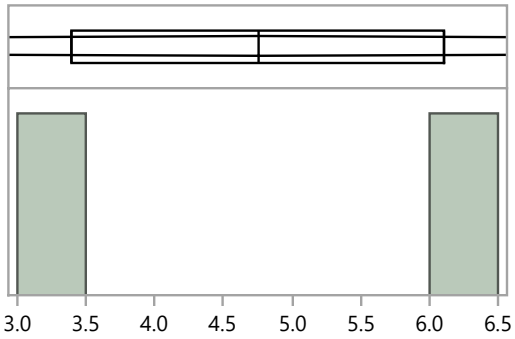
Quantiles		
100.0%	maximum	58.1
99.5%		58.1
97.5%		58.1
90.0%		58.1
75.0%	quartile	54.6
50.0%	median	28.6
25.0%	quartile	2.6
10.0%		-0.9
2.5%		-0.9
0.5%		-0.9
0.0%	minimum	-0.9

Summary Statistics	
Mean	28.6
Std Dev	27.2
Std Err Mean	13.6
Upper 95% Mean	71.8
Lower 95% Mean	-14.6
N	4.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Thorium-230 Acid leaching without hydrofluoric acid

Bias

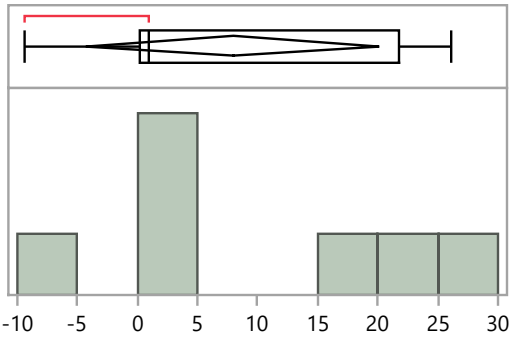


Quantiles		
100.0%	maximum	6.1
99.5%		6.1
97.5%		6.1
90.0%		6.1
75.0%	quartile	6.1
50.0%	median	4.8
25.0%	quartile	3.4
10.0%		3.4
2.5%		3.4
0.5%		3.4
0.0%	minimum	3.4

Summary Statistics	
Mean	4.8
Std Dev	1.9
Std Err Mean	1.4
Upper 95% Mean	21.9
Lower 95% Mean	-12.4
N	2.0

Distributions Analyte_Method=Thorium-230 Other

Bias

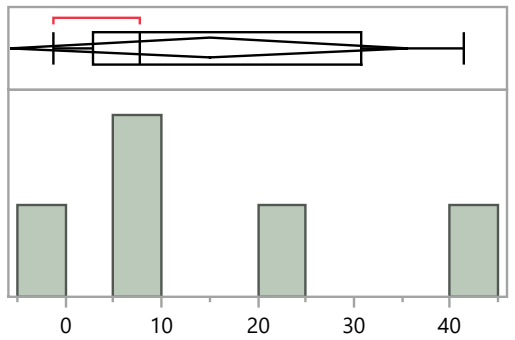


Quantiles		
100.0%	maximum	26.1
99.5%		26.1
97.5%		26.1
90.0%		26.1
75.0%	quartile	21.7
50.0%	median	0.9
25.0%	quartile	0.2
10.0%		-9.4
2.5%		-9.4
0.5%		-9.4
0.0%	minimum	-9.4

Summary Statistics	
Mean	7.9
Std Dev	13.2
Std Err Mean	5.0
Upper 95% Mean	20.1
Lower 95% Mean	-4.3
N	7.0

Distributions Analyte_Method=Thorium-230 Total dissolution by fusion

Bias



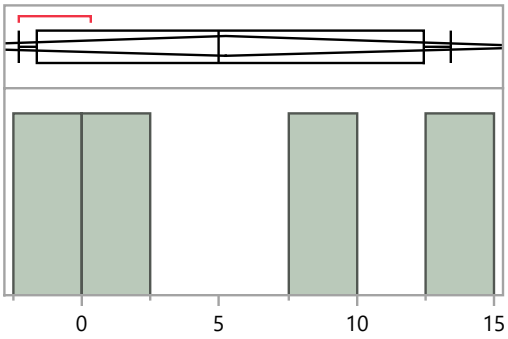
Quantiles		
100.0%	maximum	41.4
99.5%		41.4
97.5%		41.4
90.0%		41.4
75.0%	quartile	30.8
50.0%	median	7.7
25.0%	quartile	2.9
10.0%		-1.3
2.5%		-1.3
0.5%		-1.3
0.0%	minimum	-1.3

Summary Statistics	
Mean	15.0
Std Dev	16.6
Std Err Mean	7.4
Upper 95% Mean	35.7
Lower 95% Mean	-5.7
N	5.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Thorium-232 Acid dissolution with hydrofluoric acid

Bias

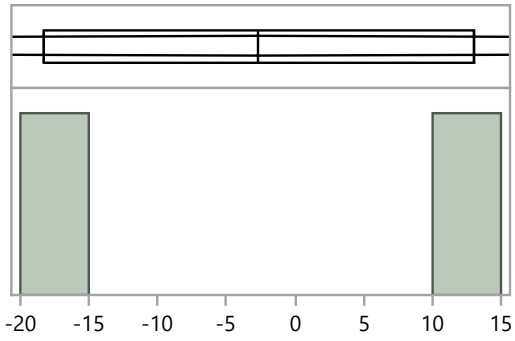


Quantiles		
100.0%	maximum	13.4
99.5%		13.4
97.5%		13.4
90.0%		13.4
75.0%	quartile	12.5
50.0%	median	5.0
25.0%	quartile	-1.7
10.0%		-2.3
2.5%		-2.3
0.5%		-2.3
0.0%	minimum	-2.3

Summary Statistics	
Mean	5.3
Std Dev	7.5
Std Err Mean	3.7
Upper 95% Mean	17.1
Lower 95% Mean	-6.6
N	4.0

Distributions Analyte_Method=Thorium-232 Acid leaching without hydrofluoric acid

Bias

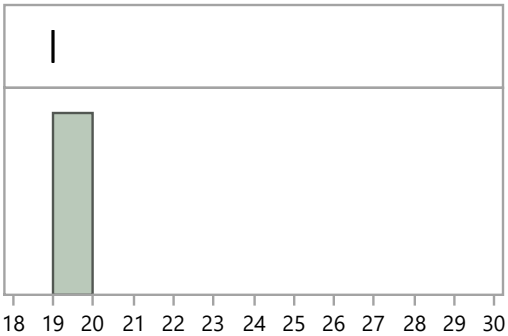


Quantiles		
100.0%	maximum	13.0
99.5%		13.0
97.5%		13.0
90.0%		13.0
75.0%	quartile	13.0
50.0%	median	-2.7
25.0%	quartile	-18.3
10.0%		-18.3
2.5%		-18.3
0.5%		-18.3
0.0%	minimum	-18.3

Summary Statistics	
Mean	-2.7
Std Dev	22.1
Std Err Mean	15.7
Upper 95% Mean	196.2
Lower 95% Mean	-201.5
N	2.0

Distributions Analyte_Method=Thorium-232 No preparation - analyzed as received

Bias



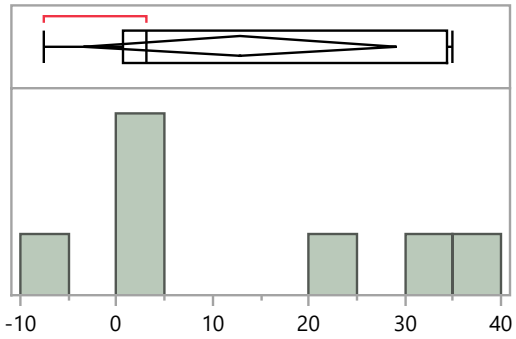
Quantiles		
100.0%	maximum	19.0
99.5%		19.0
97.5%		19.0
90.0%		19.0
75.0%	quartile	19.0
50.0%	median	19.0
25.0%	quartile	19.0
10.0%		19.0
2.5%		19.0
0.5%		19.0
0.0%	minimum	19.0

Summary Statistics	
Mean	19.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Thorium-232 Other

Bias

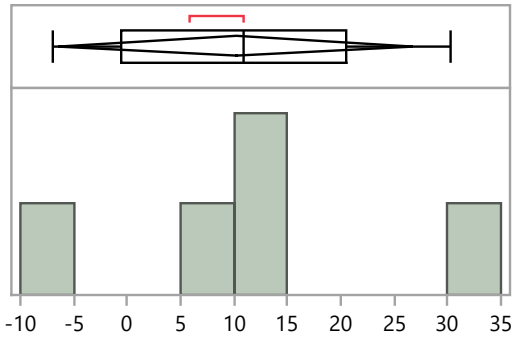


Quantiles		
100.0%	maximum	35.0
99.5%		35.0
97.5%		35.0
90.0%		35.0
75.0%	quartile	34.4
50.0%	median	3.1
25.0%	quartile	0.7
10.0%		-7.5
2.5%		-7.5
0.5%		-7.5
0.0%	minimum	-7.5

Summary Statistics	
Mean	12.8
Std Dev	17.6
Std Err Mean	6.7
Upper 95% Mean	29.1
Lower 95% Mean	-3.5
N	7.0

Distributions Analyte_Method=Thorium-232 Total dissolution by fusion

Bias

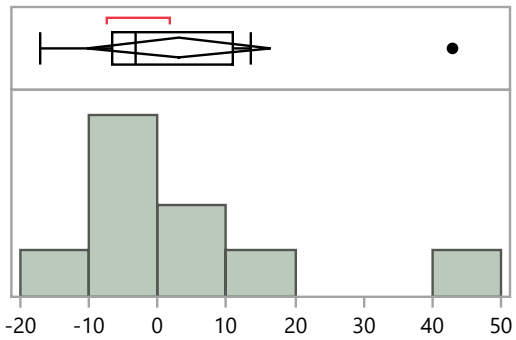


Quantiles		
100.0%	maximum	30.2
99.5%		30.2
97.5%		30.2
90.0%		30.2
75.0%	quartile	20.6
50.0%	median	10.9
25.0%	quartile	-0.5
10.0%		-7.0
2.5%		-7.0
0.5%		-7.0
0.0%	minimum	-7.0

Summary Statistics	
Mean	10.2
Std Dev	13.4
Std Err Mean	6.0
Upper 95% Mean	26.8
Lower 95% Mean	-6.4
N	5.0

Distributions Analyte_Method=Uranium-234 Acid dissolution with hydrofluoric acid

Bias



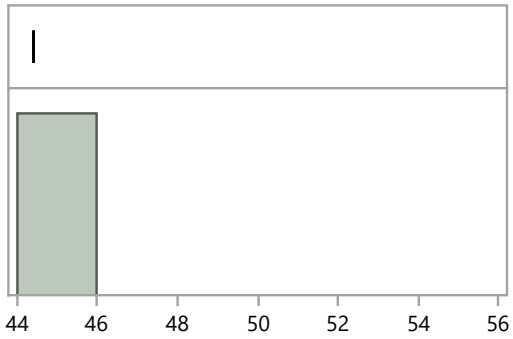
Quantiles		
100.0%	maximum	42.9
99.5%		42.9
97.5%		42.9
90.0%		42.9
75.0%	quartile	10.9
50.0%	median	-3.1
25.0%	quartile	-6.7
10.0%		-17.0
2.5%		-17.0
0.5%		-17.0
0.0%	minimum	-17.0

Summary Statistics	
Mean	3.0
Std Dev	17.4
Std Err Mean	5.8
Upper 95% Mean	16.4
Lower 95% Mean	-10.4
N	9.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-234 Acid leaching without hydrofluoric acid

Bias

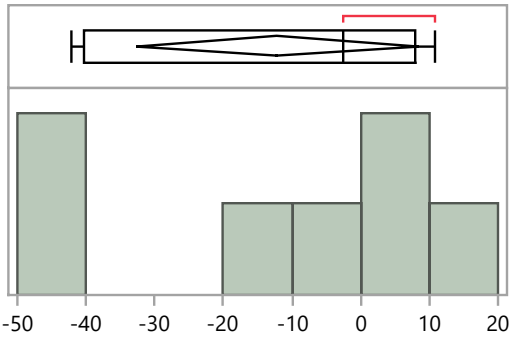


Quantiles		
100.0%	maximum	44.4
99.5%		44.4
97.5%		44.4
90.0%		44.4
75.0%	quartile	44.4
50.0%	median	44.4
25.0%	quartile	44.4
10.0%		44.4
2.5%		44.4
0.5%		44.4
0.0%	minimum	44.4

Summary Statistics	
Mean	44.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Other

Bias

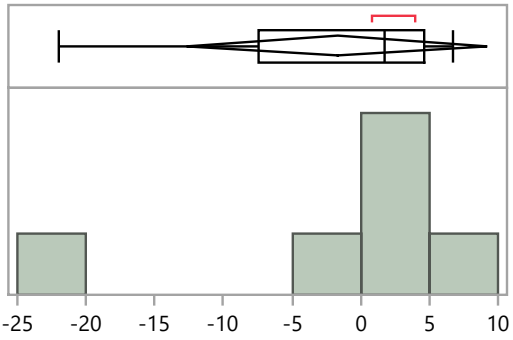


Quantiles		
100.0%	maximum	10.9
99.5%		10.9
97.5%		10.9
90.0%		10.9
75.0%	quartile	7.8
50.0%	median	-2.5
25.0%	quartile	-40.2
10.0%		-42.1
2.5%		-42.1
0.5%		-42.1
0.0%	minimum	-42.1

Summary Statistics	
Mean	-12.1
Std Dev	22.1
Std Err Mean	8.4
Upper 95% Mean	8.4
Lower 95% Mean	-32.6
N	7.0

Distributions Analyte_Method=Uranium-234 Total dissolution by fusion

Bias



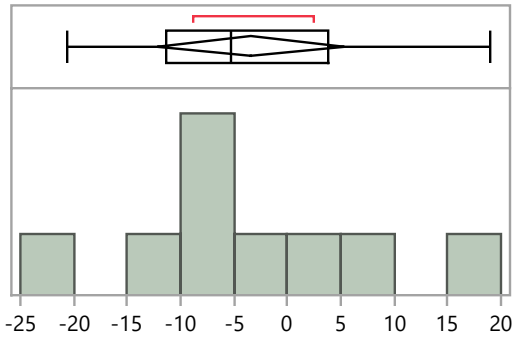
Quantiles		
100.0%	maximum	6.7
99.5%		6.7
97.5%		6.7
90.0%		6.7
75.0%	quartile	4.6
50.0%	median	1.8
25.0%	quartile	-7.4
10.0%		-22.0
2.5%		-22.0
0.5%		-22.0
0.0%	minimum	-22.0

Summary Statistics	
Mean	-1.7
Std Dev	10.4
Std Err Mean	4.2
Upper 95% Mean	9.2
Lower 95% Mean	-12.6
N	6.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-238 Acid dissolution with hydrofluoric acid

Bias

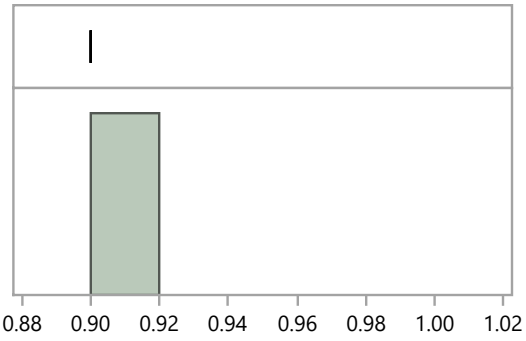


Quantiles		
100.0%	maximum	19.0
99.5%		19.0
97.5%		19.0
90.0%		19.0
75.0%	quartile	3.8
50.0%	median	-5.3
25.0%	quartile	-11.3
10.0%		-20.6
2.5%		-20.6
0.5%		-20.6
0.0%	minimum	-20.6

Summary Statistics	
Mean	-3.4
Std Dev	11.5
Std Err Mean	3.8
Upper 95% Mean	5.4
Lower 95% Mean	-12.2
N	9.0

Distributions Analyte_Method=Uranium-238 Acid leaching without hydrofluoric acid

Bias

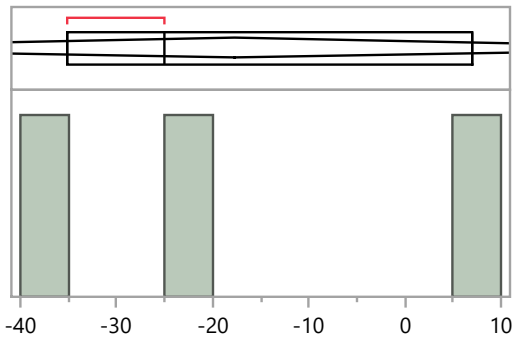


Quantiles		
100.0%	maximum	0.9
99.5%		0.9
97.5%		0.9
90.0%		0.9
75.0%	quartile	0.9
50.0%	median	0.9
25.0%	quartile	0.9
10.0%		0.9
2.5%		0.9
0.5%		0.9
0.0%	minimum	0.9

Summary Statistics	
Mean	0.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-238 No preparation - analyzed as received

Bias



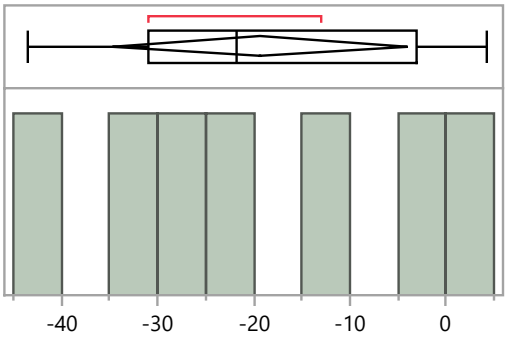
Quantiles		
100.0%	maximum	6.9
99.5%		6.9
97.5%		6.9
90.0%		6.9
75.0%	quartile	6.9
50.0%	median	-25.0
25.0%	quartile	-35.1
10.0%		-35.1
2.5%		-35.1
0.5%		-35.1
0.0%	minimum	-35.1

Summary Statistics	
Mean	-17.7
Std Dev	21.9
Std Err Mean	12.7
Upper 95% Mean	36.7
Lower 95% Mean	-72.2
N	3.0

MaS53 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-238 Other

Bias

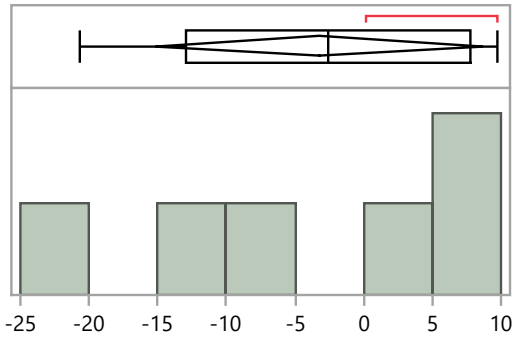


Quantiles		
100.0%	maximum	4.3
99.5%		4.3
97.5%		4.3
90.0%		4.3
75.0%	quartile	-3.1
50.0%	median	-21.8
25.0%	quartile	-30.9
10.0%		-43.4
2.5%		-43.4
0.5%		-43.4
0.0%	minimum	-43.4

Summary Statistics	
Mean	-19.4
Std Dev	16.6
Std Err Mean	6.3
Upper 95% Mean	-4.0
Lower 95% Mean	-34.8
N	7.0

Distributions Analyte_Method=Uranium-238 Total dissolution by fusion

Bias



Quantiles		
100.0%	maximum	9.7
99.5%		9.7
97.5%		9.7
90.0%		9.7
75.0%	quartile	7.8
50.0%	median	-2.6
25.0%	quartile	-12.9
10.0%		-20.7
2.5%		-20.7
0.5%		-20.7
0.0%	minimum	-20.7

Summary Statistics	
Mean	-3.2
Std Dev	11.3
Std Err Mean	4.6
Upper 95% Mean	8.7
Lower 95% Mean	-15.1
N	6.0