

## **RESL CUSTOMER EXPORT CONTROL AGREEMENT**

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

## MaSU48 Participating Laboratories

<b>Lab Code</b>	<b>Lab Name</b>	<b>Matrix Code</b>
AFOH01	USAFSAM/OEA	MaSU
ERCL01	Washington State Public Health Laboratories	MaSU
GENE01	GEL Laboratories, LLC	MaSU
HCAL01	Lawrence Livermore National Laboratory	MaSU
HPAL01	Los Alamos National Laboratory	MaSU
IDGR01	Oak Ridge National Laboratory-Internal Dosimetry Group	MaSU
IEMA01	Illinois Emergency Management Agency Radiochemistry Laboratory	MaSU
LANL01	Los Alamos National Laboratory	MaSU
RQCT01	INL Radiobioassay Quality Control Testing	MaSU
SEML01	SRS Environmental Monitoring Laboratory	MaSU
TELE01	Teledyne Brown Engineering - Environmental Services	MaSU
WIPP01	WIPP Laboratories	MaSU
WSHL01	Wisconsin State Laboratory of Hygiene	MaSU

## Laboratories Not Reporting

<b>Lab Code</b>	<b>Lab Name</b>	<b>Matrix Code</b>
NSPH01	Nevada State Public Health Laboratory	MaSU

## Study Reference Values

MAPEP-23-MaSU48

Radiological Reference Date: 02/01/2023

Analyte	Ref Value	Ref Unc	Units
<b>Mass</b>			
Plutonium-239	90.2	1.8	(pg/L)
Plutonium-240	1.90	0.04	(pg/L)
Uranium-235			(ng/L)
Uranium-236	5.38	0.11	(ng/L)
Uranium-238			(ng/L)
Uranium-Total			(ng/L)

Analyte	Ref Value	Ref Unc	Units
<b>Radiological</b>			
Americium-241	0.236	0.004	(Bq/L)
Cesium-134	9.5	0.19	(Bq/L)
Cobalt-57	8.67	0.17	(Bq/L)
Cobalt-60	8.13	0.17	(Bq/L)
Manganese-54	10.0	0.2	(Bq/L)
Plutonium-238	0.234	0.004	(Bq/L)
Plutonium-239/240	0.223	0.004	(Bq/L)
Strontium-89	43.9	1.0	(Bq/L)
Strontium-90	1.58	0.04	(Bq/L)
Uranium-234			(Bq/L)
Uranium-238			(Bq/L)
Zinc-65	9.29	0.19	(Bq/L)

## Sample Statistical Summary

MAPEP-23-MaSU48

Radiological Reference Date: 02/01/2023

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range	Units
<b>Mass</b>								
Plutonium-239	1				90.2	1.8	63.1 - 117.3	(pg/L)
Plutonium-240	1				1.90	0.04	1.33 - 2.47	(pg/L)
Uranium-235	3							(ng/L)
Uranium-236	2				5.38	0.11	3.77 - 6.99	(ng/L)
Uranium-238	3							(ng/L)
Uranium-Total	2							(ng/L)

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range	Units
<b>Radiological</b>								
Americium-241	11		0.225	0.014	0.236	0.004	0.165 - 0.307	(Bq/L)
Cesium-134	11		9.2	1.0	9.5	0.19	6.7 - 12.4	(Bq/L)
Cesium-137	11						False Positive Test	(Bq/L)
Cobalt-57	11		8.81	0.70	8.67	0.17	6.07 - 11.27	(Bq/L)
Cobalt-60	11		8.35	0.51	8.13	0.17	5.69 - 10.57	(Bq/L)
Curium-244	4						False Positive Test	(Bq/L)
Hydrogen-3	1						False Positive Test	(Bq/L)
Manganese-54	11		10.7	0.8	10.0	0.2	7.0 - 13.0	(Bq/L)
Plutonium-238	11		0.229	0.014	0.234	0.004	0.164 - 0.304	(Bq/L)
Plutonium-239/240	12		0.224	0.018	0.223	0.004	0.156 - 0.290	(Bq/L)
Strontium-89	3				43.9	1.0	30.7 - 57.1	(Bq/L)
Strontium-90	4				1.58	0.04	1.11 - 2.05	(Bq/L)
Technetium-99	2						False Positive Test	(Bq/L)
Uranium-234	11							(Bq/L)
Uranium-238	11							(Bq/L)
Zinc-65	11		9.66	0.68	9.29	0.19	6.50 - 12.08	(Bq/L)

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

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**

*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48

(AFOH01) USAFSAM/OEA

2510 Fifth Street, Area B

Wright-Patterson AFB, OH 45433-7913

MAPEP-23-MaSU48: Radiological urine standard

Mass									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L
Radiological									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.230	0.236			-2.5	0.165 - 0.307	0.016		Bq/L
Cesium-134	8.58	9.5			-9.7	6.7 - 12.4	0.30		Bq/L
Cesium-137	0.03					False Positive Test	0.07		Bq/L
Cobalt-57	7.54	8.67			-13.0	6.07 - 11.27	0.31		Bq/L
Cobalt-60	7.60	8.13			-6.5	5.69 - 10.57	0.23		Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	9.12	10.0			-8.8	7.0 - 13.0	0.28		Bq/L
Plutonium-238	0.220	0.234			-6.0	0.164 - 0.304	0.018		Bq/L
Plutonium-239/240	0.210	0.223			-5.8	0.156 - 0.290	0.017		Bq/L
Strontium-89	55.9	43.9			27.3	30.7 - 57.1	1.6		Bq/L
Strontium-90	1.6	1.58			1.3	1.11 - 2.05	0.08		Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	0.0008						0.0014		Bq/L
Uranium-238	0.0005						0.0010		Bq/L
Zinc-65	8.67	9.29			-6.7	6.50 - 12.08	0.42		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**
*Radiological Reference Date: 02/01/2023*
**Laboratory Results For MAPEP Series 48**

 (ERCL01) Washington State Public Health Laboratories  
 1610 N.E. 150th Street  
 Shoreline, WA 98155-9701

MAPEP-23-MaSU48: Radiological urine standard

**Mass**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-235	0.4						3.6		ng/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L
Uranium-238	40						440		ng/L
Uranium-Total	40						440		ng/L

**Radiological**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.223	0.236			-5.5	0.165 - 0.307	0.017		Bq/L
Cesium-134	10.0	9.5			5.3	6.7 - 12.4	0.3		Bq/L
Cesium-137	-0.10					False Positive Test	0.13		Bq/L
Cobalt-57	9.44	8.67			8.9	6.07 - 11.27	0.24		Bq/L
Cobalt-60	8.81	8.13			8.4	5.69 - 10.57	0.19		Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	11.2	10.0			12.0	7.0 - 13.0	0.3		Bq/L
Plutonium-238	0.244	0.234			4.3	0.164 - 0.304	0.007		Bq/L
Plutonium-239/240	0.223	0.223			0.0	0.156 - 0.290	0.016		Bq/L
Strontium-89	34.3	43.9			-21.9	30.7 - 57.1	1.7		Bq/L
Strontium-90	1.44	1.58			-8.9	1.11 - 2.05	0.07		Bq/L
Technetium-99	-0.70					False Positive Test	0.30		Bq/L
Uranium-234	0.0001						0.0035		Bq/L
Uranium-238	-0.0022						0.0023		Bq/L
Zinc-65	10.2	9.29			9.8	6.50 - 12.08	0.5		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**
**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**
**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**
*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48

(GENE01) GEL Laboratories, LLC

2040 Savage Road

Charleston, SC 29407

MAPEP-23-MaSU48: Radiological urine standard

**Mass**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L

**Radiological**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.2183	0.236			-7.5	0.165 - 0.307	0.0175		Bq/L
Cesium-134	7.460	9.5			-21.5	6.7 - 12.4	0.685		Bq/L
Cesium-137	0.130					False Positive Test	0.193		Bq/L
Cobalt-57	9.2	8.67			6.1	6.07 - 11.27	0.650		Bq/L
Cobalt-60	8.84	8.13			8.7	5.69 - 10.57	0.795		Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	11.2	10.0			12.0	7.0 - 13.0	0.848		Bq/L
Plutonium-238	0.2133	0.234			-8.8	0.164 - 0.304	0.0139		Bq/L
Plutonium-239/240	0.2150	0.223			-3.6	0.156 - 0.290	0.0140		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	0.133					False Positive Test	0.159		Bq/L
Uranium-234	-0.00001						0.0009		Bq/L
Uranium-238	-0.00161						0.000603		Bq/L
Zinc-65	8.41	9.29			-9.5	6.50 - 12.08	1.44		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**



**MAPEP-23-MaSU48**

*Radiological Reference Date: 02/01/2023*

*Laboratory Results For MAPEP Series 48*

(HCAL01) Lawrence Livermore National Laboratory  
Analytical Services and Instrumentation Analytical Lab  
Livermore, CA 94550

MAPEP-23-MaSU48: Radiological urine standard

Mass

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-235	NR								ng/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L
Uranium-238	NR								ng/L
Uranium-Total	NR								ng/L

Radiological

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.249	0.236			5.5	0.165 - 0.307	0.015		Bq/L
Cesium-134	9.262	9.5			-2.5	6.7 - 12.4	0.232		Bq/L
Cesium-137	0.206					False Positive Test	0.114		Bq/L
Cobalt-57	9.238	8.67			6.6	6.07 - 11.27	0.254		Bq/L
Cobalt-60	8.090	8.13			-0.5	5.69 - 10.57	0.172		Bq/L
Curium-244	0.000008					False Positive Test	0.000039		Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	10.668	10.0			6.7	7.0 - 13.0	0.282		Bq/L
Plutonium-238	0.232	0.234			-0.9	0.164 - 0.304	0.014		Bq/L
Plutonium-239/240	0.222	0.223			-0.4	0.156 - 0.290	0.013		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Zinc-65	9.206	9.29			-0.9	6.50 - 12.08	0.235		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**
*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48  
(HPAL01) Los Alamos National Laboratory  
Josh Chandler, z338219 MS G761  
Los Alamos, NM 87545-1663

MAPEP-23-MaSU48: Radiological urine standard

Mass									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	90.70	90.2			0.6	63.1 - 117.3	0.99		pg/L
Plutonium-240	1.99	1.90			4.7	1.33 - 2.47	0.027		pg/L
Uranium-235	4.39E-03						1.6E-04		ng/L
Uranium-236	4.61E+00	5.38			-14.3	3.77 - 6.99	1.1E-01		ng/L
Uranium-238	1.29E-02						3.7E-04		ng/L
Uranium-Total	4.63E+00						1.3E-01		ng/L

Radiological									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	2.37E-01	0.236			0.4	0.165 - 0.307	1.3E-02		Bq/L
Cesium-134	NR	9.5				6.7 - 12.4			Bq/L
Cesium-137	NR					False Positive Test			Bq/L
Cobalt-57	NR	8.67				6.07 - 11.27			Bq/L
Cobalt-60	NR	8.13				5.69 - 10.57			Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	NR	10.0				7.0 - 13.0			Bq/L
Plutonium-238	NR	0.234				0.164 - 0.304			Bq/L
Plutonium-239/240	2.23E-01	0.223			0.0	0.156 - 0.290	2.5E-03		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	-8.45E-05						1.4E-05		Bq/L
Uranium-238	2.18E-07						6.2E-09		Bq/L
Zinc-65	NR	9.29				6.50 - 12.08			Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**
*Radiological Reference Date: 02/01/2023*
**Laboratory Results For MAPEP Series 48**

 (IDGR01) Oak Ridge National Laboratory-Internal Dosimetry Group  
 Bethel Valley Road  
 Oak Ridge, TN 37831-6107

MAPEP-23-MaSU48: Radiological urine standard

Mass									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-235	-0.01						0.04		ng/L
Uranium-236	5.0	5.38			-7.1	3.77 - 6.99	0.4		ng/L
Uranium-238	0.4						2.2		ng/L
Radiological									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.22	0.236			-6.8	0.165 - 0.307	0.01		Bq/L
Cesium-134	8.3	9.5			-12.6	6.7 - 12.4	0.2		Bq/L
Cesium-137	0.02					False Positive Test	0.06		Bq/L
Cobalt-57	9.2	8.67			6.1	6.07 - 11.27	0.3		Bq/L
Cobalt-60	8.2	8.13			0.9	5.69 - 10.57	0.2		Bq/L
Curium-244	0.000001					False Positive Test	0.000087		Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	10.5	10.0			5.0	7.0 - 13.0	0.3		Bq/L
Plutonium-238	0.23	0.234			-1.7	0.164 - 0.304	0.01		Bq/L
Plutonium-239/240	0.22	0.223			-1.3	0.156 - 0.290	0.01		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	-0.0001						0.0007		Bq/L
Uranium-238	-0.0003						0.0006		Bq/L
Zinc-65	9.8	9.29			5.5	6.50 - 12.08	0.4		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**
**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**
**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**

*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48

(IEMA01) Illinois Emergency Management Agency Radiochemistry Laboratory  
1301 Knotts St.  
Springfield, IL 62703

MAPEP-23-MaSU48: Radiological urine standard

Mass

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L

Radiological

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.16	0.236			-32.2	0.165 - 0.307	0.031		Bq/L
Cesium-134	10.6	9.5			11.6	6.7 - 12.4	0.07		Bq/L
Cesium-137	-0.093			(29)		False Positive Test	0.03		Bq/L
Cobalt-57	9.65	8.67			11.3	6.07 - 11.27	0.07		Bq/L
Cobalt-60	8.79	8.13			8.1	5.69 - 10.57	0.07		Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	10.7	10.0			7.0	7.0 - 13.0	0.10		Bq/L
Plutonium-238	0.2550	0.234			9.0	0.164 - 0.304	0.0174		Bq/L
Plutonium-239/240	0.2273	0.223			1.9	0.156 - 0.290	0.0164		Bq/L
Strontium-89	39.14	43.9			-10.8	30.7 - 57.1	2.27		Bq/L
Strontium-90	1.62	1.58			2.5	1.11 - 2.05	0.36		Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	0.00047						0.00127		Bq/L
Uranium-238	0.00031						0.00116		Bq/L
Zinc-65	9.59	9.29			3.2	6.50 - 12.08	0.16		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**Notes:**

(29) = Statistically significant negative value at 3 standard deviations

**MAPEP-23-MaSU48**
*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48  
 (LANL01) Los Alamos National Laboratory  
 P. O. Box 1663  
 Los Alamos, NM 87545

MAPEP-23-MaSU48: Radiological urine standard

## Mass

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L

## Radiological

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	NR	0.236				0.165 - 0.307			Bq/L
Cesium-134	NR	9.5				6.7 - 12.4			Bq/L
Cesium-137	NR					False Positive Test			Bq/L
Cobalt-57	NR	8.67				6.07 - 11.27			Bq/L
Cobalt-60	NR	8.13				5.69 - 10.57			Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	NR	10.0				7.0 - 13.0			Bq/L
Plutonium-238	2.22E-01	0.234			-5.1	0.164 - 0.304	7.4E-03		Bq/L
Plutonium-239/240	2.11E-01	0.223			-5.4	0.156 - 0.290	7.1E-03		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Zinc-65	NR	9.29				6.50 - 12.08			Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**
*Radiological Reference Date: 02/01/2023*
*Laboratory Results For MAPEP Series 48*

(RQCT01) INL Radiobioassay Quality Control Testing

PO Box 1625, MS 2114

Idaho Falls, ID 83415

MAPEP-23-MaSU48: Radiological urine standard

**Mass**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L

**Radiological**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	2.18E-01	0.236			-7.6	0.165 - 0.307	1.73E-02		Bq/L
Cesium-134	1.01E+01	9.5			6.3	6.7 - 12.4	1.19E+00		Bq/L
Cesium-137	-4.60E-02					False Positive Test	2.84E-01		Bq/L
Cobalt-57	8.93E+00	8.67			3.0	6.07 - 11.27	9.98E-01		Bq/L
Cobalt-60	8.75E+00	8.13			7.6	5.69 - 10.57	1.28E+00		Bq/L
Curium-244	-1.49E-04					False Positive Test	2.55E-04		Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	1.15E+01	10.0			15.0	7.0 - 13.0	1.43E+00		Bq/L
Plutonium-238	2.06E-01	0.234			-12.0	0.164 - 0.304	1.31E-02		Bq/L
Plutonium-239/240	2.13E-01	0.223			-4.5	0.156 - 0.290	1.35E-02		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	1.45E-03						1.38E-03		Bq/L
Uranium-238	6.19E-04						9.75E-04		Bq/L
Zinc-65	1.02E+01	9.29			9.8	6.50 - 12.08	1.83E+00		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**
**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**
**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**

*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48

(SEML01) SRS Environmental Monitoring Laboratory

Bldg 735-B

Aiken, SC 29808

MAPEP-23-MaSU48: Radiological urine standard

Mass

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L

Radiological

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.218	0.236			-7.6	0.165 - 0.307	0.013		Bq/L
Cesium-134	9.57	9.5			0.7	6.7 - 12.4	0.74		Bq/L
Cesium-137	0.16					False Positive Test	0.24		Bq/L
Cobalt-57	7.96	8.67			-8.2	6.07 - 11.27	0.72		Bq/L
Cobalt-60	8.07	8.13			-0.7	5.69 - 10.57	0.66		Bq/L
Curium-244	0.00003					False Positive Test	0.00010		Bq/L
Hydrogen-3	20					False Positive Test	12		Bq/L
Manganese-54	10.6	10.0			6.0	7.0 - 13.0	1.1		Bq/L
Plutonium-238	0.238	0.234			1.7	0.164 - 0.304	0.016		Bq/L
Plutonium-239/240	0.220	0.223			-1.3	0.156 - 0.290	0.017		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	0.00011						0.00096		Bq/L
Uranium-238	0.00031						0.00044		Bq/L
Zinc-65	10.3	9.29			10.9	6.50 - 12.08	1.1		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**
*Radiological Reference Date: 02/01/2023*
**Laboratory Results For MAPEP Series 48**

 (TELE01) Teledyne Brown Engineering - Environmental Services  
 2508 Quality Lane  
 Knoxville, TN 37931-6819

MAPEP-23-MaSU48: Radiological urine standard

**Mass**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L

**Radiological**

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	NR	0.236				0.165 - 0.307			Bq/L
Cesium-134	9.92	9.5			4.4	6.7 - 12.4	.308		Bq/L
Cesium-137	.0994					False Positive Test	.16		Bq/L
Cobalt-57	9.352	8.67			7.9	6.07 - 11.27	.294		Bq/L
Cobalt-60	9.034	8.13			11.1	5.69 - 10.57	0.333		Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	11.8	10.0			18.0	7.0 - 13.0	0.5		Bq/L
Plutonium-238	NR	0.234				0.164 - 0.304			Bq/L
Plutonium-239/240	NR	0.223				0.156 - 0.290			Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	0.0098						0.00372		Bq/L
Uranium-238	0.0096						0.0045		Bq/L
Zinc-65	10.6	9.29			14.1	6.50 - 12.08	.933		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**
**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**
**The chelated urine samples contain 1 g of DTPA per sample.**



**MAPEP-23-MaSU48**

*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48

(WIPP01) WIPP Laboratories

1400 University Drive

Carlsbad, NM 88220

MAPEP-23-MaSU48: Radiological urine standard

Mass									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L
Radiological									
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	1.99E-001	0.236			-15.7	0.165 - 0.307	1.17E-002		Bq/L
Cesium-134	8.11E+000	9.5			-14.6	6.7 - 12.4	2.20E-001		Bq/L
Cesium-137	-5.48E-002					False Positive Test	1.04E-001		Bq/L
Cobalt-57	8.23E+000	8.67			-5.1	6.07 - 11.27	2.36E-001		Bq/L
Cobalt-60	7.64E+000	8.13			-6.0	5.69 - 10.57	2.83E-001		Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	9.94E+000	10.0			-0.6	7.0 - 13.0	3.15E-001		Bq/L
Plutonium-238	2.40E-001	0.234			2.6	0.164 - 0.304	1.85E-002		Bq/L
Plutonium-239/240	2.22E-001	0.223			-0.4	0.156 - 0.290	1.72E-002		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	9.55E+000	1.58			504.4	1.11 - 2.05	3.42E-001		Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	-2.58E-004						1.38E-003		Bq/L
Uranium-238	5.17E-004						9.35E-004		Bq/L
Zinc-65	9.56E+000	9.29			2.9	6.50 - 12.08	5.77E-001		Bq/L

**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

**MAPEP-23-MaSU48**

*Radiological Reference Date: 02/01/2023*

Laboratory Results For MAPEP Series 48

(WSHL01) Wisconsin State Laboratory of Hygiene

2601 Agriculture Drive

Madison, WI 53718

MAPEP-23-MaSU48: Radiological urine standard

Mass

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Plutonium-239	NR	90.2				63.1 - 117.3			pg/L
Plutonium-240	NR	1.90				1.33 - 2.47			pg/L
Uranium-236	NR	5.38				3.77 - 6.99			ng/L

Radiological

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag	Units
Americium-241	0.2384	0.236			1.0	0.165 - 0.307	0.03034		Bq/L
Cesium-134	8.92	9.5			-6.1	6.7 - 12.4	0.204		Bq/L
Cesium-137	0.00307					False Positive Test	0.0433		Bq/L
Cobalt-57	8.19	8.67			-5.5	6.07 - 11.27	0.23		Bq/L
Cobalt-60	8.03	8.13			-1.2	5.69 - 10.57	0.454		Bq/L
Curium-244	NR					False Positive Test			Bq/L
Hydrogen-3	NR					False Positive Test			Bq/L
Manganese-54	10.2	10.0			2.0	7.0 - 13.0	0.453		Bq/L
Plutonium-238	0.2216	0.234			-5.3	0.164 - 0.304	0.03009		Bq/L
Plutonium-239/240	0.2777	0.223			24.5	0.156 - 0.290	0.03237		Bq/L
Strontium-89	NR	43.9				30.7 - 57.1			Bq/L
Strontium-90	NR	1.58				1.11 - 2.05			Bq/L
Technetium-99	NR					False Positive Test			Bq/L
Uranium-234	0.01325						0.0261		Bq/L
Uranium-238	-0.00003875						0.01111		Bq/L
Zinc-65	9.69	9.29			4.3	6.50 - 12.08	0.749		Bq/L

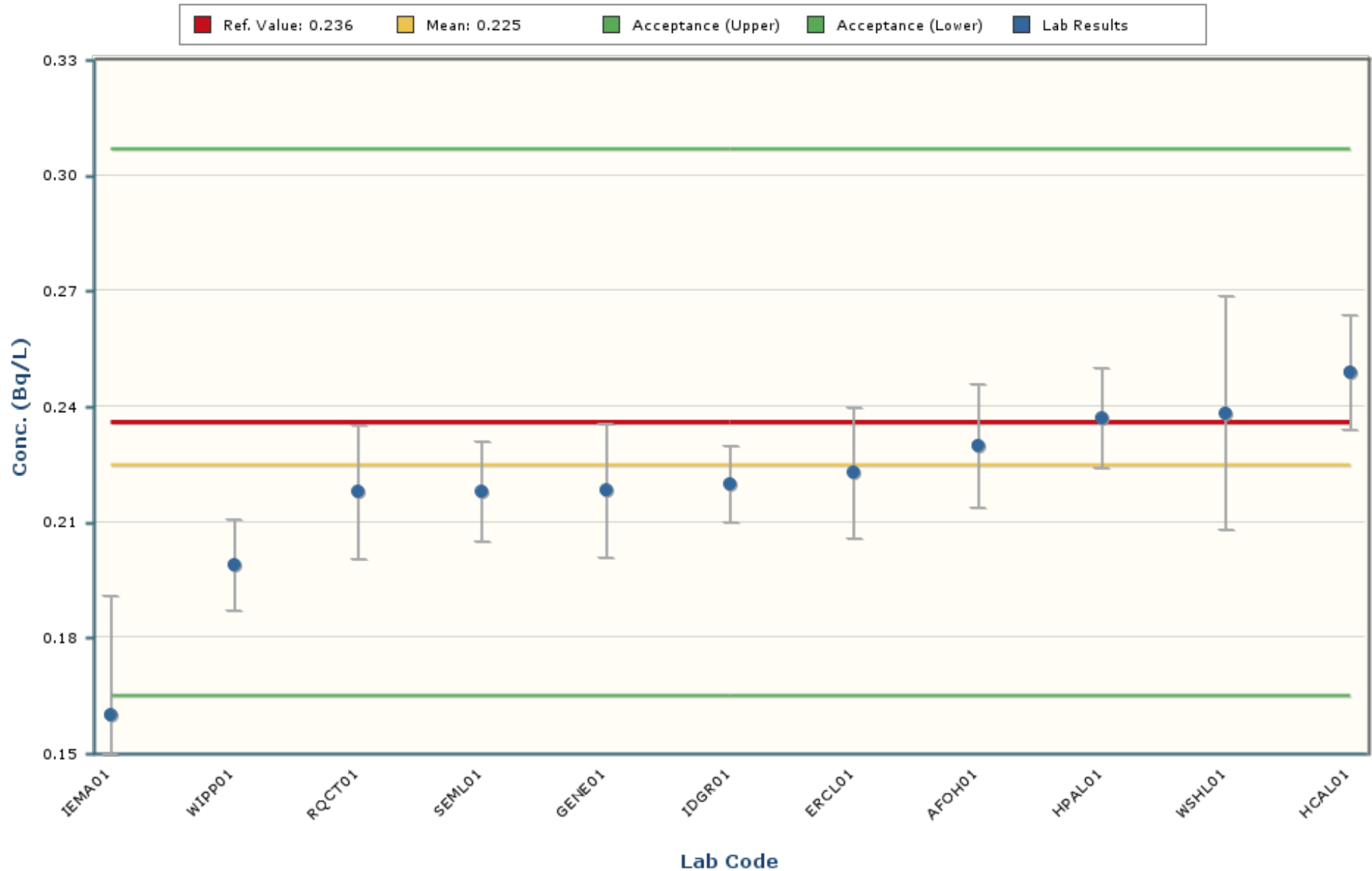
**RESL measured a K-40 value in the background urine of 52 +/- 3 Bq/L.**

**RESL did not add a U-234/238 spike to the MaSU48 Sample Matrix.**

**The chelated urine samples contain 1 g of DTPA per sample.**

# Americium-241

## MAPEP-23-MaSU48



### Notes:

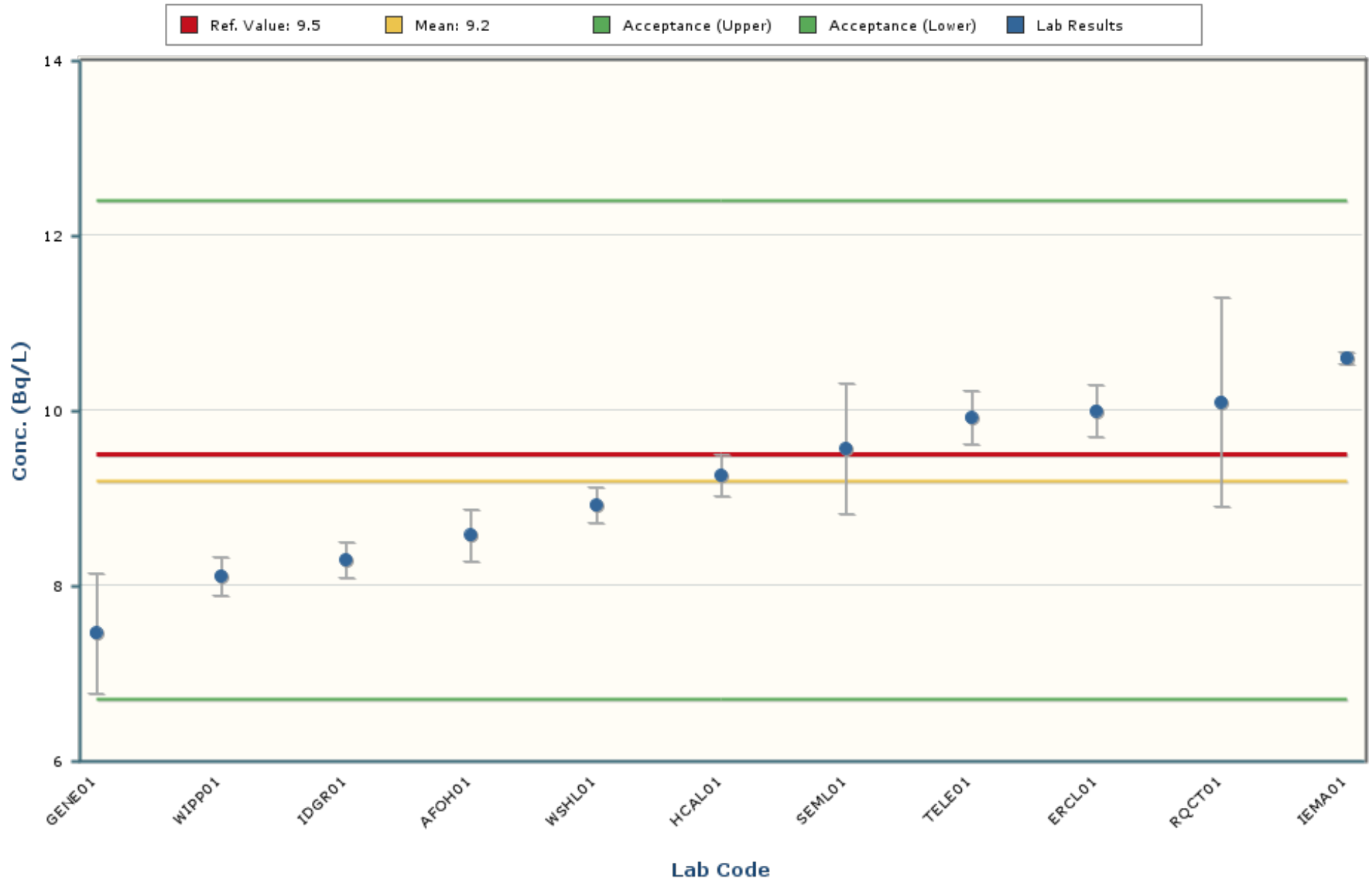
The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

The chart shows only data points with values between 0.155 and 0.295 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm$  one standard deviation.

# Cesium-134

## MAPEP-23-MaSU48



### Notes:

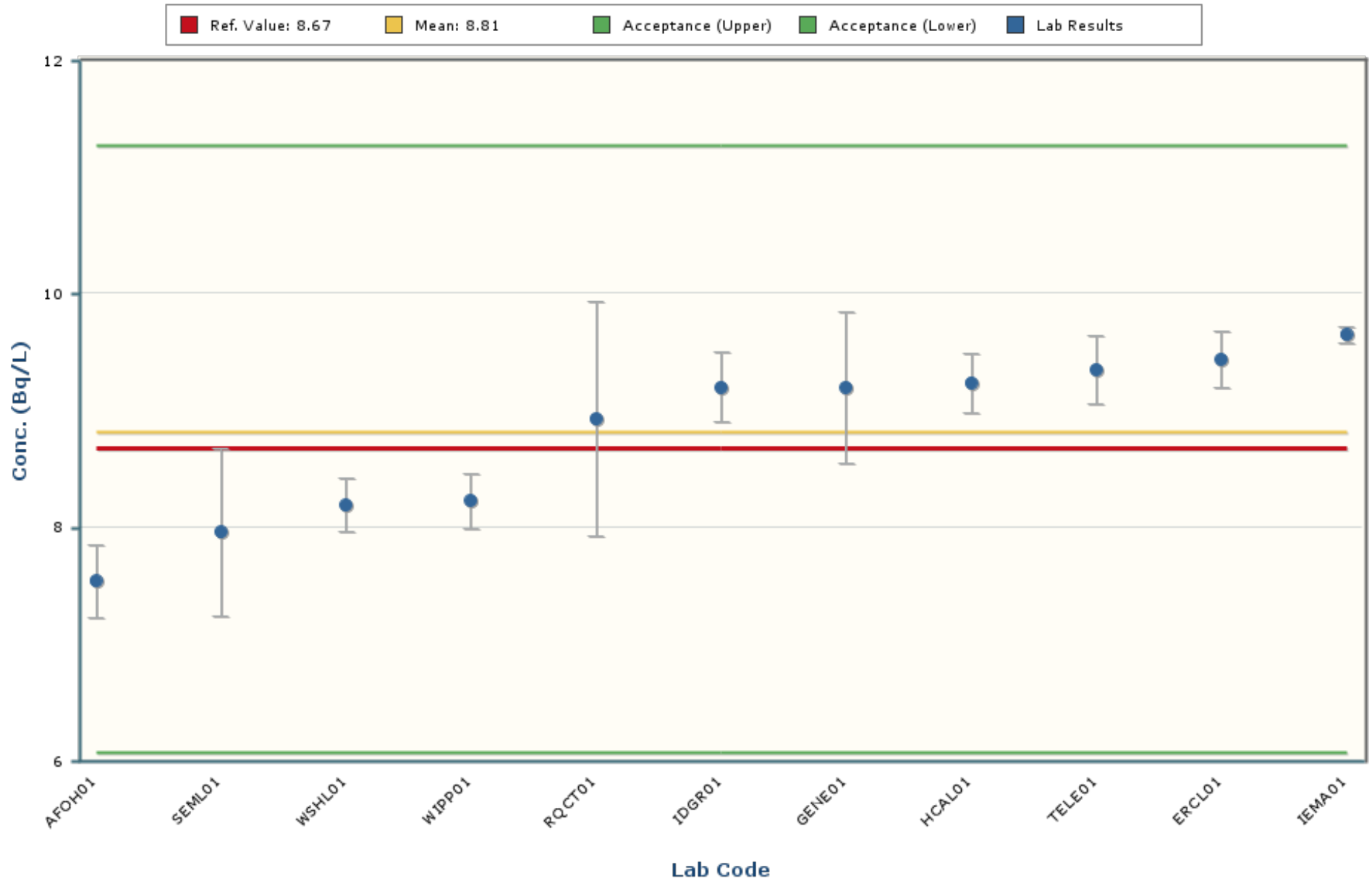
The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

The chart shows only data points with values between 4.3 and 14.1 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm 1$  standard deviation.

# Cobalt-57

## MAPEP-23-MaSU48



### Notes:

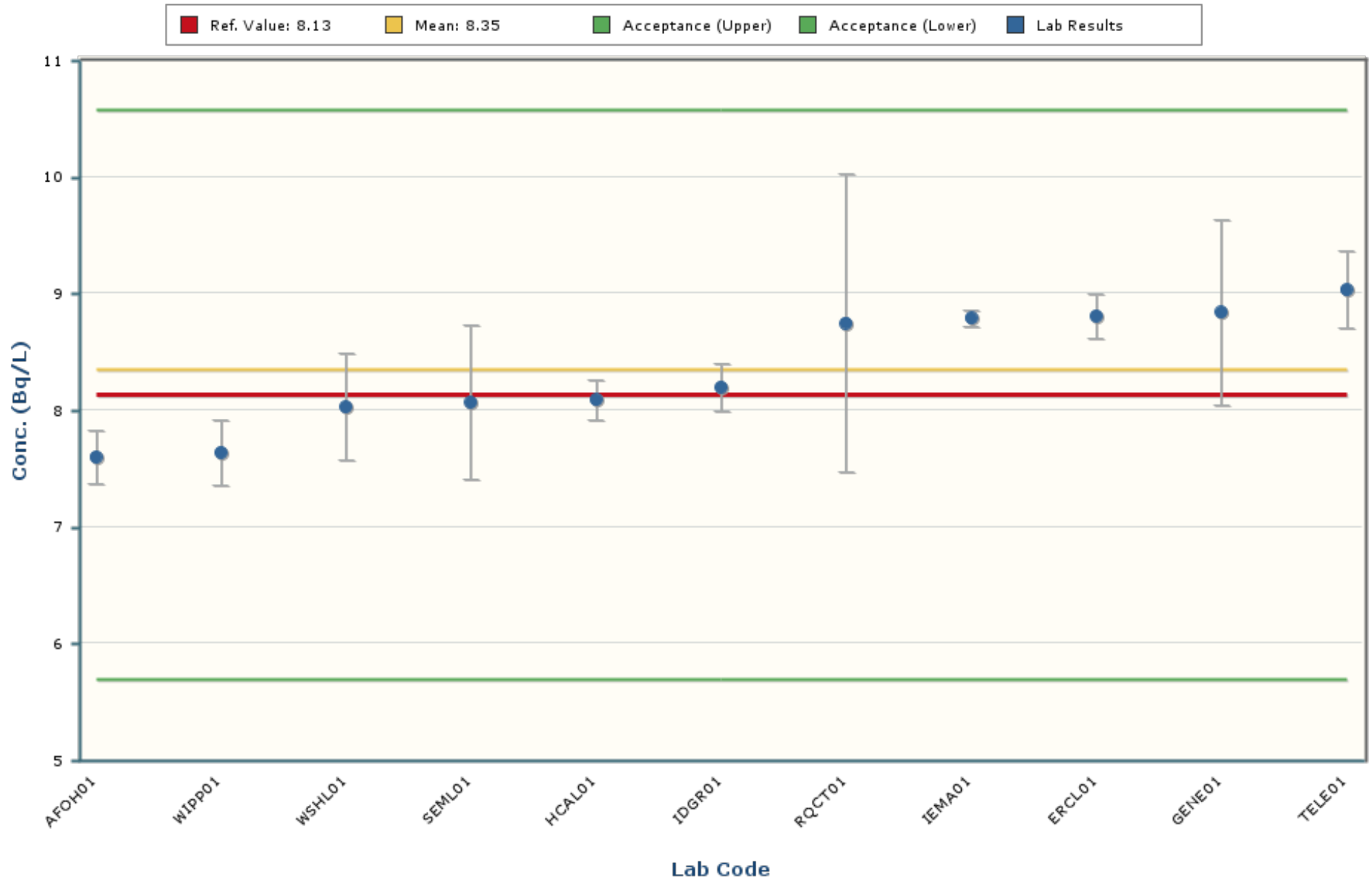
The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

The chart shows only data points with values between 5.29 and 12.33 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm 1$  standard deviation.

# Cobalt-60

## MAPEP-23-MaSU48



### Notes:

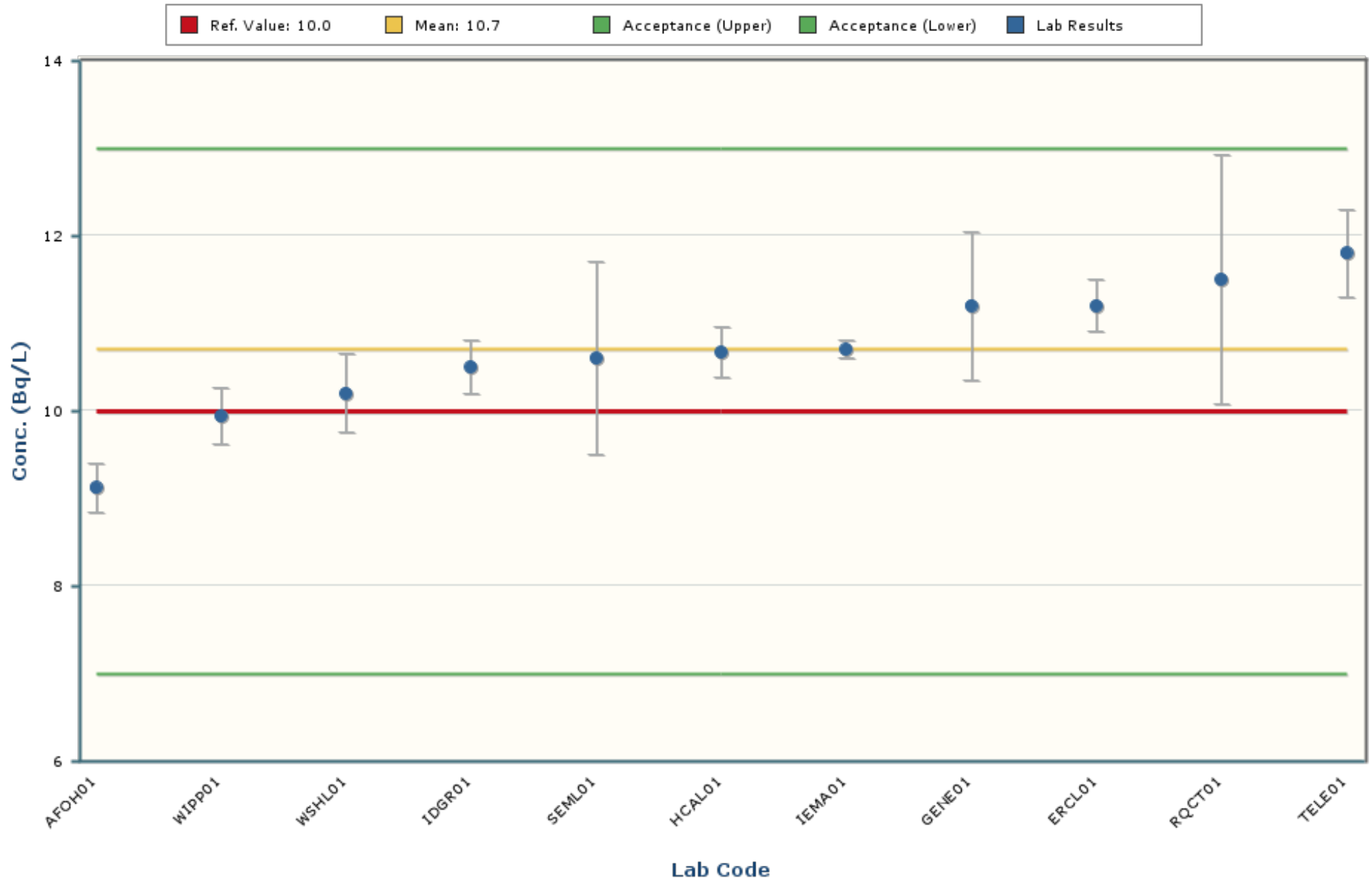
The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

The chart shows only data points with values between 5.80 and 10.91 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm 1$  standard deviation.

# Manganese-54

## MAPEP-23-MaSU48



### Notes:

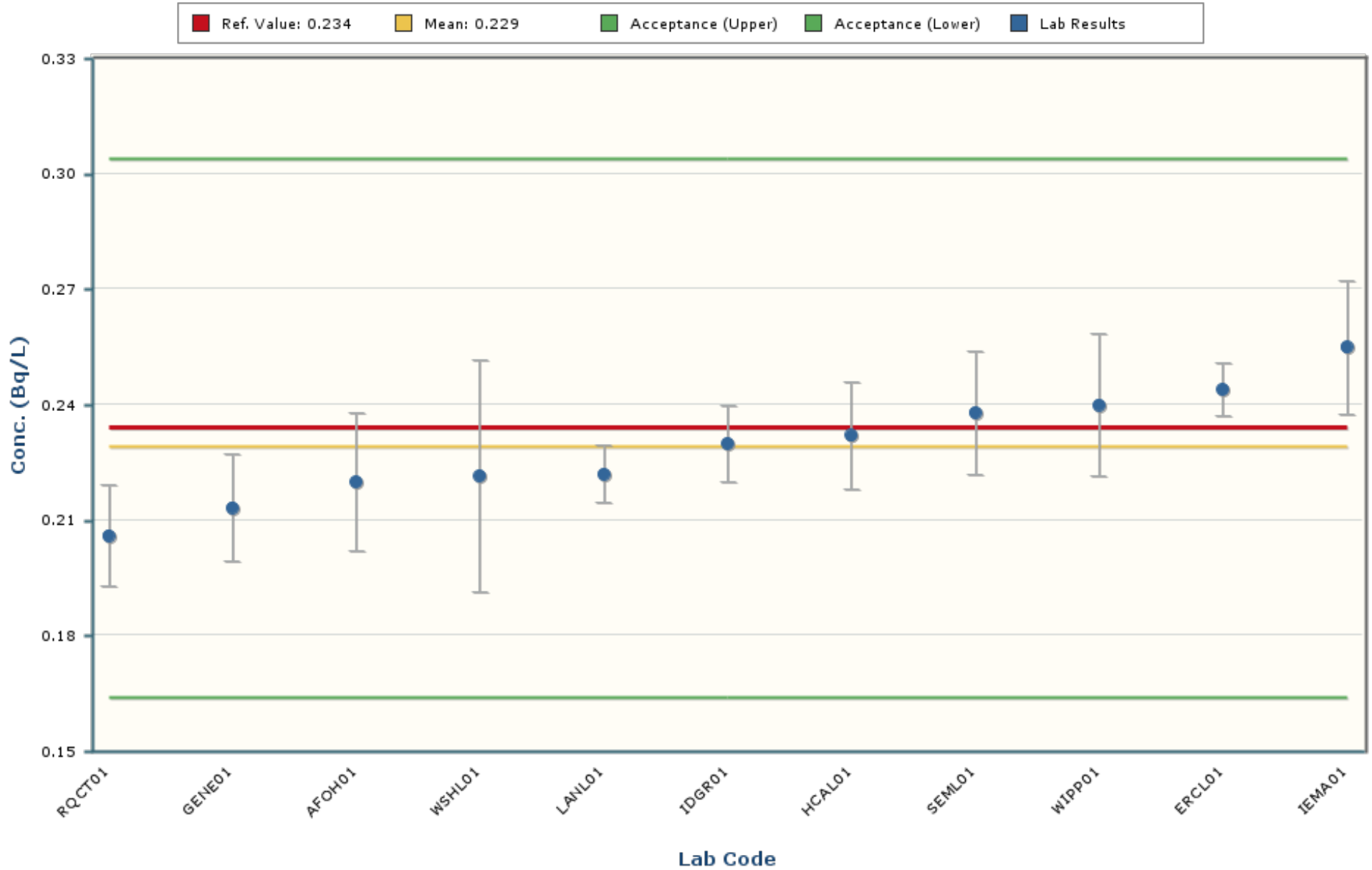
The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

The chart shows only data points with values between 6.9 and 14.5 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm$  one standard deviation.

# Plutonium-238

## MAPEP-23-MaSU48



### Notes:

The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

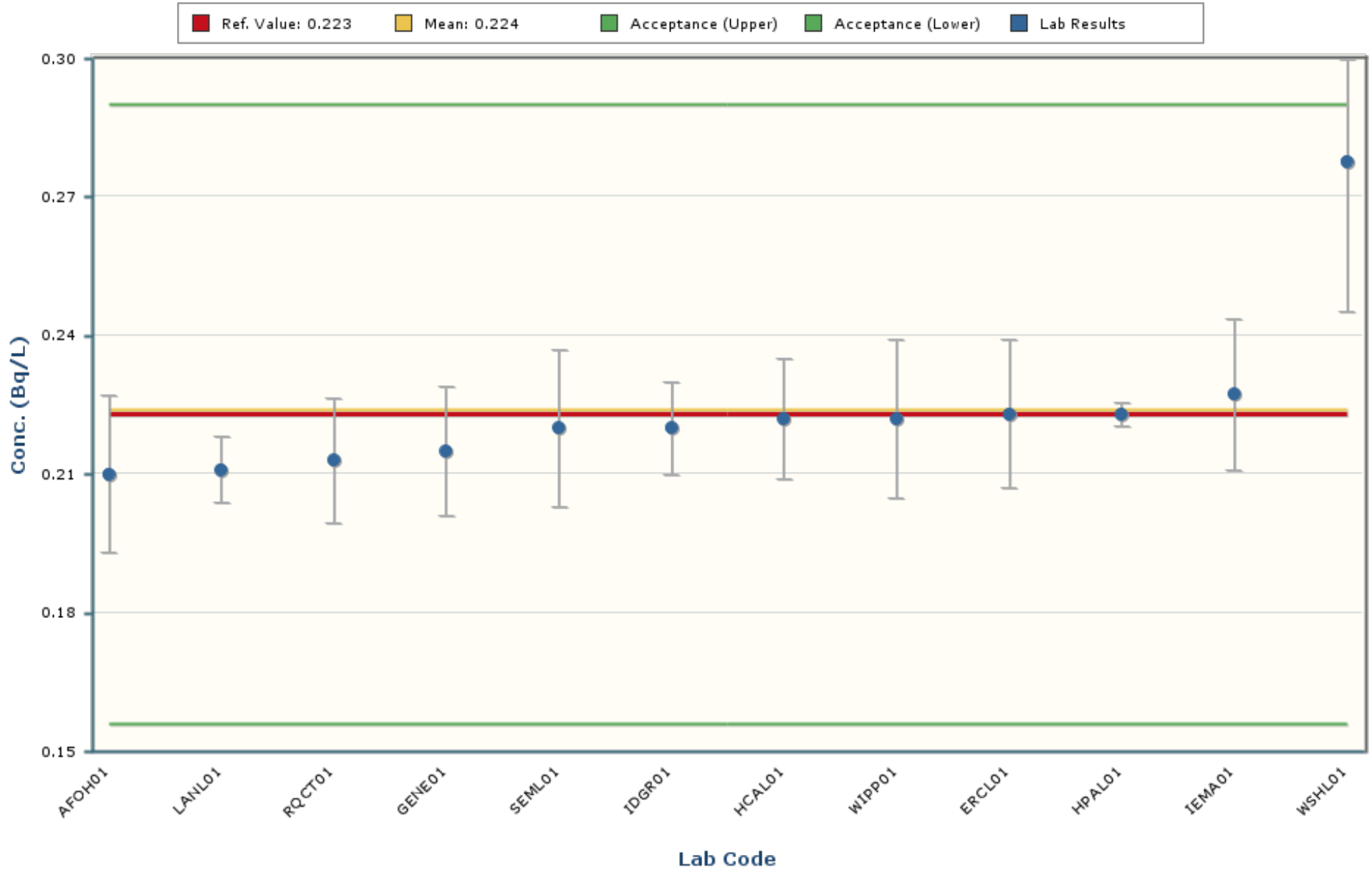
The chart shows only data points with values between 0.157 and 0.301 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm$  one standard deviation.



# Plutonium-239/240

## MAPEP-23-MaSU48



### Notes:

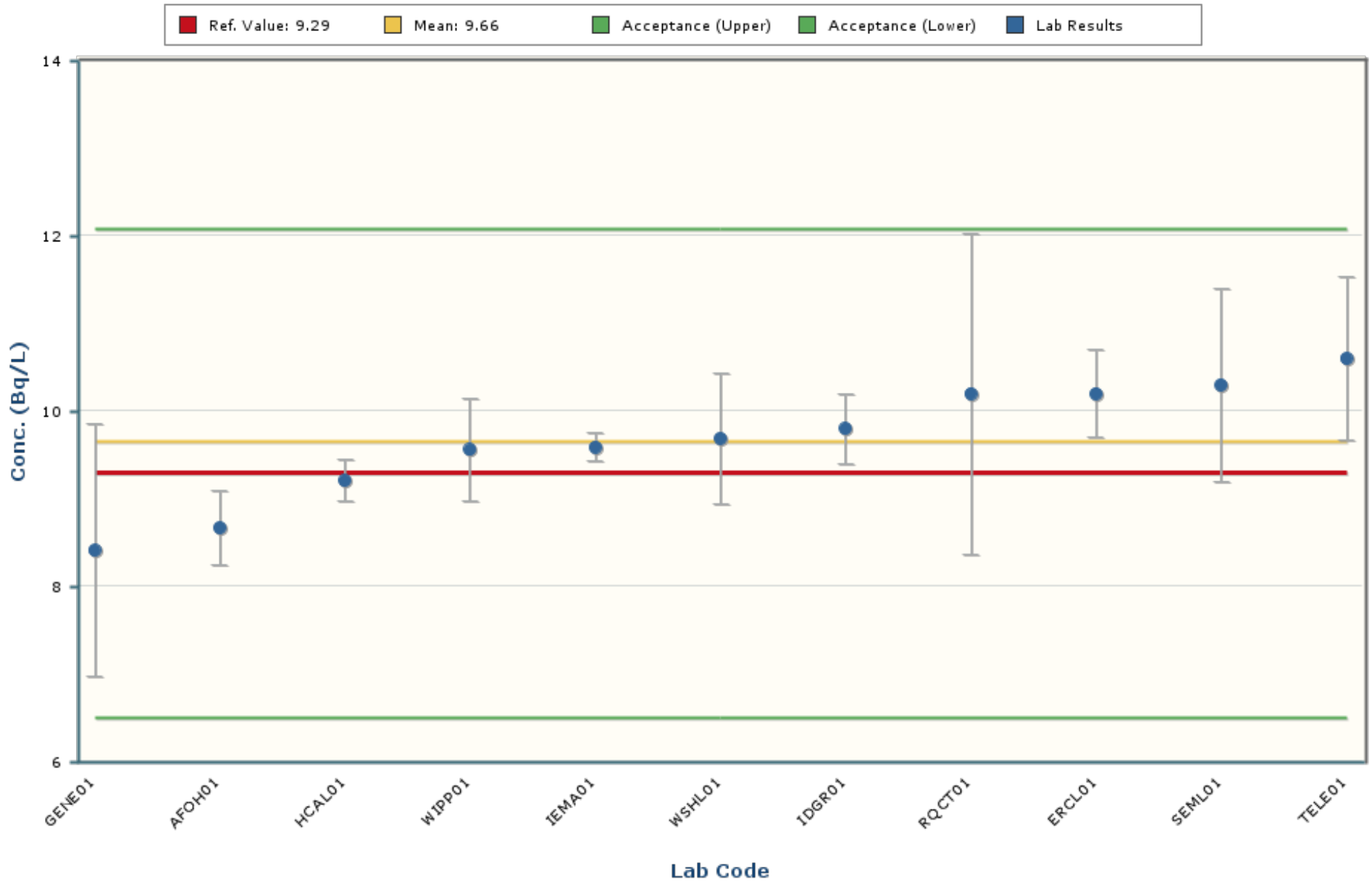
The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

The chart shows only data points with values between 0.134 and 0.313 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm$  one standard deviation.

# Zinc-65

## MAPEP-23-MaSU48



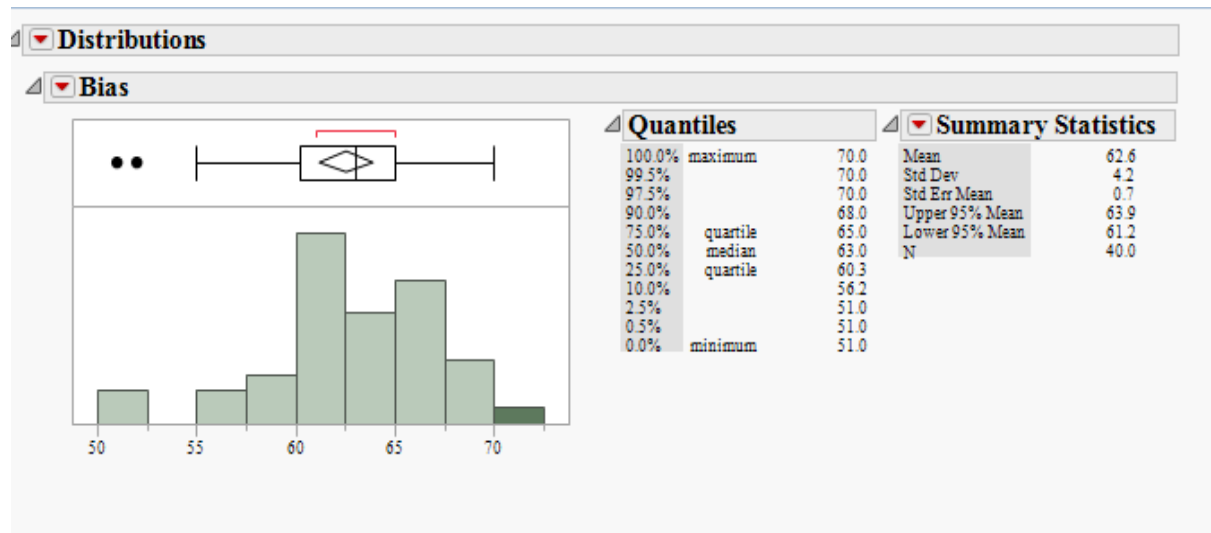
### Notes:

The chart mean excludes values outside of a bias range of  $\pm 30\%$ .

The chart shows only data points with values between 6.24 and 13.07 ( $\pm 5$  Standard Deviations).

The error bars encompassing each result are plotted at  $\pm 1$  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.

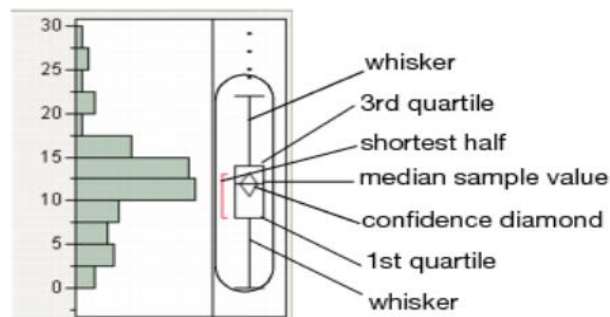


### Outlier Box Plot

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 1<sup>st</sup> and 3<sup>rd</sup> quartile. The difference between the 1<sup>st</sup> and 3<sup>rd</sup> 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)

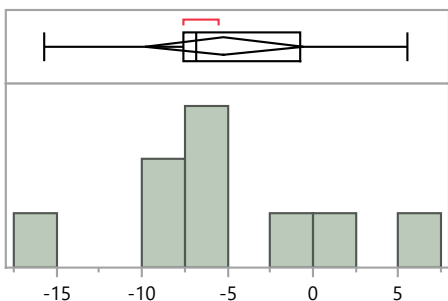


If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

### MaSU Distribution by Detection Method

#### Distributions Analyte\_Detection=Americium-241 Alpha Spectrometry

##### Bias



##### Quantiles

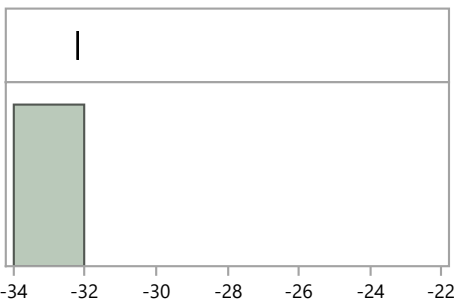
100.0%	maximum	5.5
99.5%		5.5
97.5%		5.5
90.0%		5.5
75.0%	quartile	-0.8
50.0%	median	-6.8
25.0%	quartile	-7.6
10.0%		-15.7
2.5%		-15.7
0.5%		-15.7
0.0%	minimum	-15.7

##### Summary Statistics

Mean	-5.2
Std Dev	6.0
Std Err Mean	2.0
Upper 95% Mean	-0.6
Lower 95% Mean	-9.8
N	9.0

#### Distributions Analyte\_Detection=Americium-241 Gamma Spectrometry

##### Bias



##### Quantiles

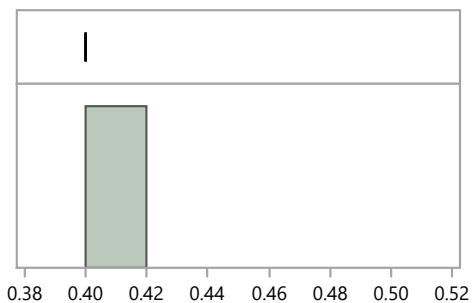
100.0%	maximum	-32.2
99.5%		-32.2
97.5%		-32.2
90.0%		-32.2
75.0%	quartile	-32.2
50.0%	median	-32.2
25.0%	quartile	-32.2
10.0%		-32.2
2.5%		-32.2
0.5%		-32.2
0.0%	minimum	-32.2

##### Summary Statistics

Mean	-32.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

#### Distributions Analyte\_Detection=Americium-241 Inductively Coupled Plasma Mass Spectrometry

##### Bias



##### Quantiles

100.0%	maximum	0.4
99.5%		0.4
97.5%		0.4
90.0%		0.4
75.0%	quartile	0.4
50.0%	median	0.4
25.0%	quartile	0.4
10.0%		0.4
2.5%		0.4
0.5%		0.4
0.0%	minimum	0.4

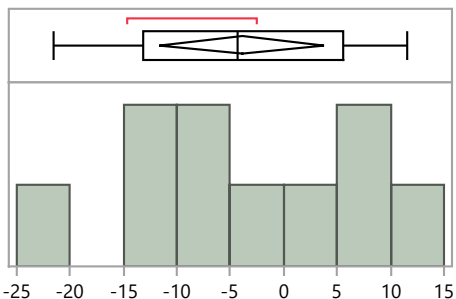
##### Summary Statistics

Mean	0.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

### MaSU Distribution by Detection Method

#### Distributions Analyte\_Detection=Cesium-134 Gamma Spectrometry

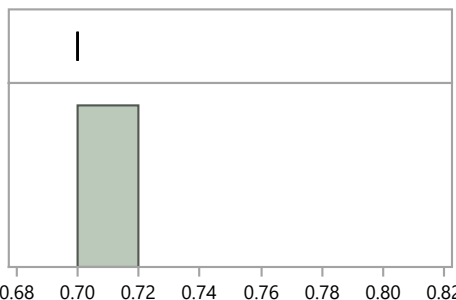
##### Bias



Quantiles		Summary Statistics		
100.0%	maximum	11.6	Mean	-3.9
99.5%		11.6	Std Dev	10.7
97.5%		11.6	Std Err Mean	3.4
90.0%		11.1	Upper 95% Mean	3.7
75.0%	quartile	5.6	Lower 95% Mean	-11.6
50.0%	median	-4.3	N	10.0
25.0%	quartile	-13.1		
10.0%		-20.8		
2.5%		-21.5		
0.5%		-21.5		
0.0%	minimum	-21.5		

#### Distributions Analyte\_Detection=Cesium-134 Liquid Scintillation Counter

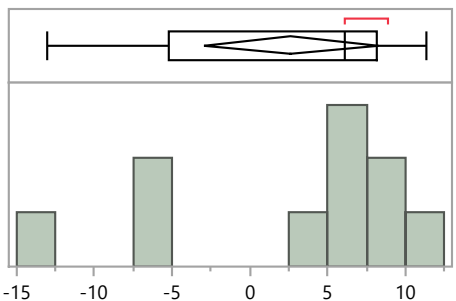
##### Bias



Quantiles		Summary Statistics		
100.0%	maximum	0.7	Mean	0.7
99.5%		0.7	Std Dev	.
97.5%		0.7	Std Err Mean	.
90.0%		0.7	Upper 95% Mean	.
75.0%	quartile	0.7	Lower 95% Mean	.
50.0%	median	0.7	N	1.0
25.0%	quartile	0.7		
10.0%		0.7		
2.5%		0.7		
0.5%		0.7		
0.0%	minimum	0.7		

#### Distributions Analyte\_Detection=Cobalt-57 Gamma Spectrometry

##### Bias

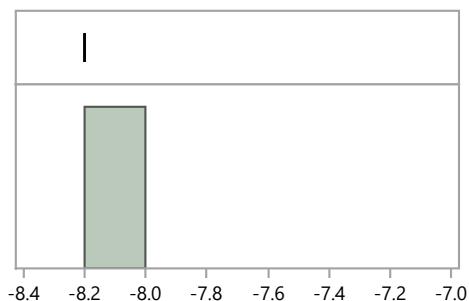


Quantiles		Summary Statistics		
100.0%	maximum	11.3	Mean	2.6
99.5%		11.3	Std Dev	7.8
97.5%		11.3	Std Err Mean	2.5
90.0%		11.1	Upper 95% Mean	8.2
75.0%	quartile	8.2	Lower 95% Mean	-3.0
50.0%	median	6.1	N	10.0
25.0%	quartile	-5.2		
10.0%		-12.3		
2.5%		-13.0		
0.5%		-13.0		
0.0%	minimum	-13.0		

### MaSU Distribution by Detection Method

#### Distributions Analyte\_Detection=Cobalt-57 Liquid Scintillation Counter

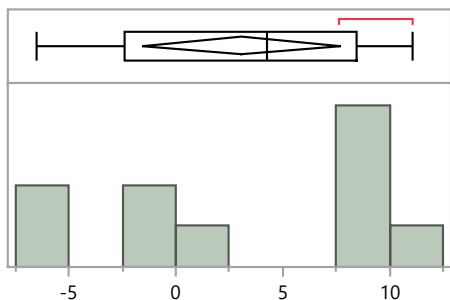
Bias



Quantiles		Summary Statistics		
100.0%	maximum	-8.2	Mean	-8.2
99.5%		-8.2	Std Dev	.
97.5%		-8.2	Std Err Mean	.
90.0%		-8.2	Upper 95% Mean	.
75.0%	quartile	-8.2	Lower 95% Mean	.
50.0%	median	-8.2	N	1.0
25.0%	quartile	-8.2		
10.0%		-8.2		
2.5%		-8.2		
0.5%		-8.2		
0.0%	minimum	-8.2		

#### Distributions Analyte\_Detection=Cobalt-60 Gamma Spectrometry

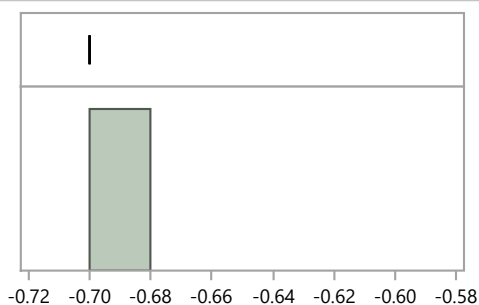
Bias



Quantiles		Summary Statistics		
100.0%	maximum	11.1	Mean	3.1
99.5%		11.1	Std Dev	6.5
97.5%		11.1	Std Err Mean	2.1
90.0%		10.9	Upper 95% Mean	7.7
75.0%	quartile	8.5	Lower 95% Mean	-1.6
50.0%	median	4.3	N	10.0
25.0%	quartile	-2.4		
10.0%		-6.5		
2.5%		-6.5		
0.5%		-6.5		
0.0%	minimum	-6.5		

#### Distributions Analyte\_Detection=Cobalt-60 Liquid Scintillation Counter

Bias

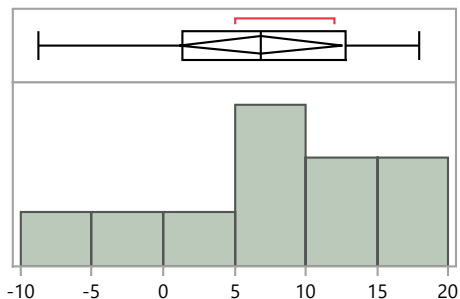


Quantiles		Summary Statistics		
100.0%	maximum	-0.7	Mean	-0.7
99.5%		-0.7	Std Dev	.
97.5%		-0.7	Std Err Mean	.
90.0%		-0.7	Upper 95% Mean	.
75.0%	quartile	-0.7	Lower 95% Mean	.
50.0%	median	-0.7	N	1.0
25.0%	quartile	-0.7		
10.0%		-0.7		
2.5%		-0.7		
0.5%		-0.7		
0.0%	minimum	-0.7		

**MaSU Distribution by Detection Method**

**Distributions Analyte\_Detection=Manganese-54 Gamma Spectrometry**

**Bias**



**Quantiles**

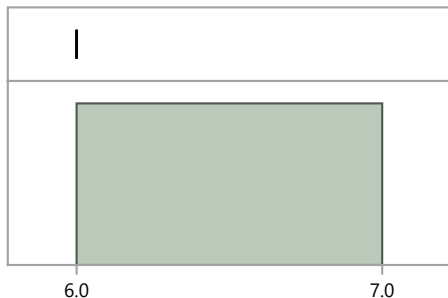
100.0%	maximum	18.0
99.5%		18.0
97.5%		18.0
90.0%		17.7
75.0%	quartile	12.8
50.0%	median	6.9
25.0%	quartile	1.4
10.0%		-8.0
2.5%		-8.8
0.5%		-8.8
0.0%	minimum	-8.8

**Summary Statistics**

Mean	6.8
Std Dev	8.0
Std Err Mean	2.5
Upper 95% Mean	12.5
Lower 95% Mean	1.1
N	10.0

**Distributions Analyte\_Detection=Manganese-54 Liquid Scintillation Counter**

**Bias**



**Quantiles**

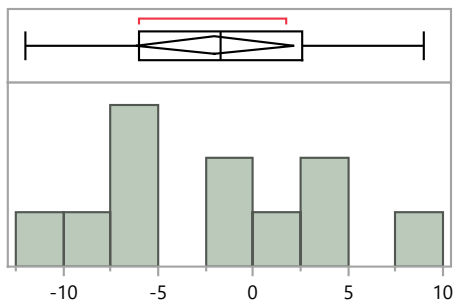
100.0%	maximum	6.0
99.5%		6.0
97.5%		6.0
90.0%		6.0
75.0%	quartile	6.0
50.0%	median	6.0
25.0%	quartile	6.0
10.0%		6.0
2.5%		6.0
0.5%		6.0
0.0%	minimum	6.0

**Summary Statistics**

Mean	6.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Detection=Plutonium-238 Alpha Spectrometry**

**Bias**



**Quantiles**

100.0%	maximum	9.0
99.5%		9.0
97.5%		9.0
90.0%		8.1
75.0%	quartile	2.6
50.0%	median	-1.7
25.0%	quartile	-6.0
10.0%		-11.4
2.5%		-12.0
0.5%		-12.0
0.0%	minimum	-12.0

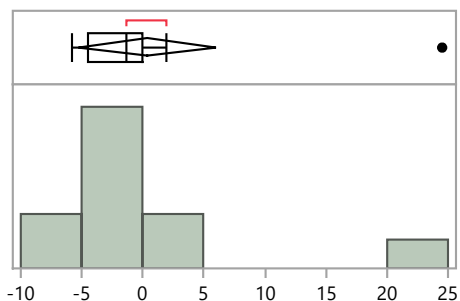
**Summary Statistics**

Mean	-2.0
Std Dev	6.2
Std Err Mean	1.9
Upper 95% Mean	2.1
Lower 95% Mean	-6.2
N	11.0

**MaSU Distribution by Detection Method**

**Distributions Analyte\_Detection=Plutonium-239/240 Alpha Spectrometry**

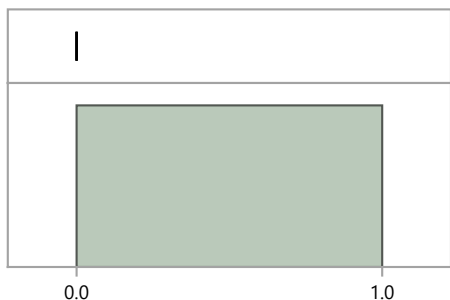
**Bias**



Quantiles			Summary Statistics	
100.0%	maximum	24.5	Mean	0.3
99.5%		24.5	Std Dev	8.4
97.5%		24.5	Std Err Mean	2.5
90.0%		20.0	Upper 95% Mean	6.0
75.0%	quartile	0.0	Lower 95% Mean	-5.3
50.0%	median	-1.3	N	11.0
25.0%	quartile	-4.5		
10.0%		-5.7		
2.5%		-5.8		
0.5%		-5.8		
0.0%	minimum	-5.8		

**Distributions Analyte\_Detection=Plutonium-239/240 Thermal Ionization Mass Spectrometry**

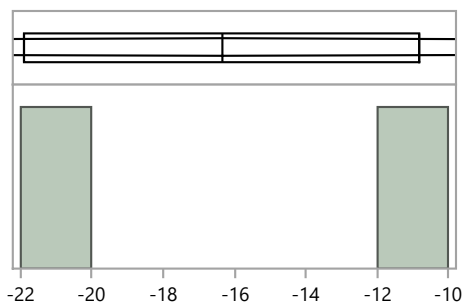
**Bias**



Quantiles			Summary Statistics	
100.0%	maximum	0.0	Mean	0.0
99.5%		0.0	Std Dev	.
97.5%		0.0	Std Err Mean	.
90.0%		0.0	Upper 95% Mean	.
75.0%	quartile	0.0	Lower 95% Mean	.
50.0%	median	0.0	N	1.0
25.0%	quartile	0.0		
10.0%		0.0		
2.5%		0.0		
0.5%		0.0		
0.0%	minimum	0.0		

**Distributions Analyte\_Detection=Strontium-89 Gross Alpha/Beta - 2 pi gas flow proportional counter**

**Bias**



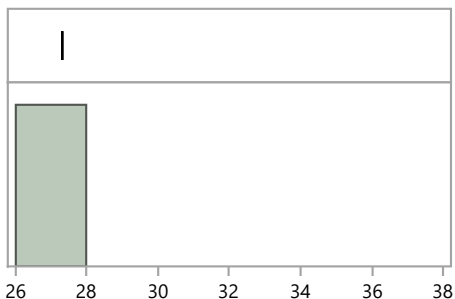
Quantiles			Summary Statistics	
100.0%	maximum	-10.8	Mean	-16.4
99.5%		-10.8	Std Dev	7.8
97.5%		-10.8	Std Err Mean	5.5
90.0%		-10.8	Upper 95% Mean	54.2
75.0%	quartile	-10.8	Lower 95% Mean	-86.9
50.0%	median	-16.4	N	2.0
25.0%	quartile	-21.9		
10.0%		-21.9		
2.5%		-21.9		
0.5%		-21.9		
0.0%	minimum	-21.9		



**MaSU Distribution by Detection Method**

**Distributions Analyte\_Detection=Strontium-89 Other**

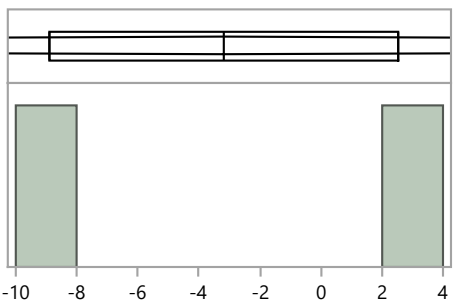
**Bias**



Quantiles			Summary Statistics	
100.0%	maximum	27.3	Mean	27.3
99.5%		27.3	Std Dev	.
97.5%		27.3	Std Err Mean	.
90.0%		27.3	Upper 95% Mean	.
75.0%	quartile	27.3	Lower 95% Mean	.
50.0%	median	27.3	N	1.0
25.0%	quartile	27.3		
10.0%		27.3		
2.5%		27.3		
0.5%		27.3		
0.0%	minimum	27.3		

**Distributions Analyte\_Detection=Strontium-90 Gross Alpha/Beta - 2 pi gas flow proportional counter**

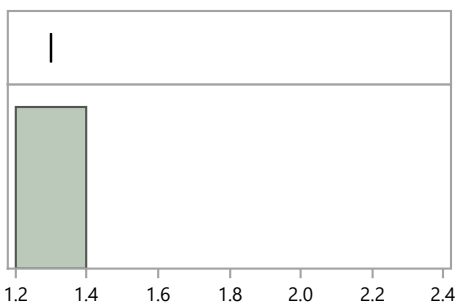
**Bias**



Quantiles			Summary Statistics	
100.0%	maximum	2.5	Mean	-3.2
99.5%		2.5	Std Dev	8.1
97.5%		2.5	Std Err Mean	5.7
90.0%		2.5	Upper 95% Mean	69.2
75.0%	quartile	2.5	Lower 95% Mean	-75.6
50.0%	median	-3.2	N	2.0
25.0%	quartile	-8.9		
10.0%		-8.9		
2.5%		-8.9		
0.5%		-8.9		
0.0%	minimum	-8.9		

**Distributions Analyte\_Detection=Strontium-90 Other**

**Bias**

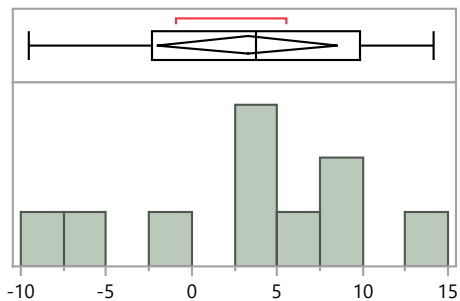


Quantiles			Summary Statistics	
100.0%	maximum	1.3	Mean	1.3
99.5%		1.3	Std Dev	.
97.5%		1.3	Std Err Mean	.
90.0%		1.3	Upper 95% Mean	.
75.0%	quartile	1.3	Lower 95% Mean	.
50.0%	median	1.3	N	1.0
25.0%	quartile	1.3		
10.0%		1.3		
2.5%		1.3		
0.5%		1.3		
0.0%	minimum	1.3		

**MaSU Distribution by Detection Method**

**Distributions Analyte\_Detection=Zinc-65 Gamma Spectrometry**

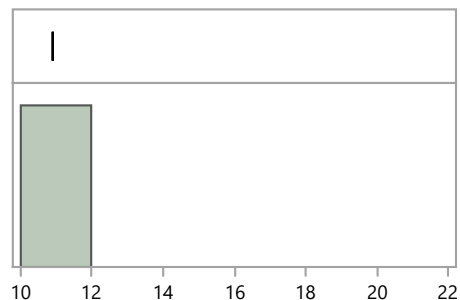
**Bias**



Quantiles			Summary Statistics	
100.0%	maximum	14.1	Mean	3.3
99.5%		14.1	Std Dev	7.4
97.5%		14.1	Std Err Mean	2.3
90.0%		13.7	Upper 95% Mean	8.5
75.0%	quartile	9.8	Lower 95% Mean	-2.0
50.0%	median	3.8	N	10.0
25.0%	quartile	-2.4		
10.0%		-9.2		
2.5%		-9.5		
0.5%		-9.5		
0.0%	minimum	-9.5		

**Distributions Analyte\_Detection=Zinc-65 Liquid Scintillation Counter**

**Bias**

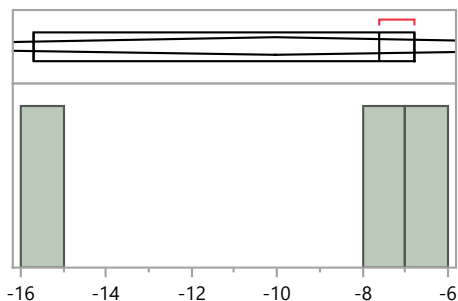


Quantiles			Summary Statistics	
100.0%	maximum	10.9	Mean	10.9
99.5%		10.9	Std Dev	.
97.5%		10.9	Std Err Mean	.
90.0%		10.9	Upper 95% Mean	.
75.0%	quartile	10.9	Lower 95% Mean	.
50.0%	median	10.9	N	1.0
25.0%	quartile	10.9		
10.0%		10.9		
2.5%		10.9		
0.5%		10.9		
0.0%	minimum	10.9		

**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Americium-241 Coprecipitation, acidified**

**Bias**



**Quantiles**

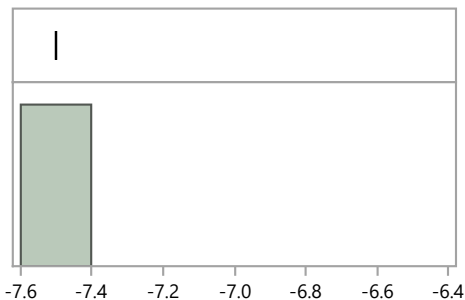
100.0%	maximum	-6.8
99.5%		-6.8
97.5%		-6.8
90.0%		-6.8
75.0%	quartile	-6.8
50.0%	median	-7.6
25.0%	quartile	-15.7
10.0%		-15.7
2.5%		-15.7
0.5%		-15.7
0.0%	minimum	-15.7

**Summary Statistics**

Mean	-10.0
Std Dev	4.9
Std Err Mean	2.8
Upper 95% Mean	2.2
Lower 95% Mean	-22.3
N	3.0

**Distributions Analyte\_Method=Americium-241 Coprecipitation, straight**

**Bias**



**Quantiles**

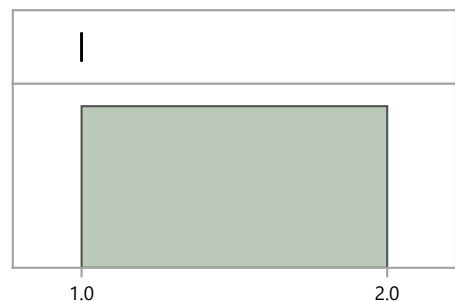
100.0%	maximum	-7.5
99.5%		-7.5
97.5%		-7.5
90.0%		-7.5
75.0%	quartile	-7.5
50.0%	median	-7.5
25.0%	quartile	-7.5
10.0%		-7.5
2.5%		-7.5
0.5%		-7.5
0.0%	minimum	-7.5

**Summary Statistics**

Mean	-7.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Method=Americium-241 Evaporation, acidified**

**Bias**



**Quantiles**

100.0%	maximum	1.0
99.5%		1.0
97.5%		1.0
90.0%		1.0
75.0%	quartile	1.0
50.0%	median	1.0
25.0%	quartile	1.0
10.0%		1.0
2.5%		1.0
0.5%		1.0
0.0%	minimum	1.0

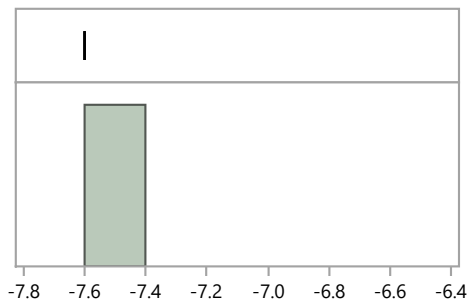
**Summary Statistics**

Mean	1.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Americium-241 Ion Exchange Chromatography / Ion Chromatography**

**Bias**



**Quantiles**

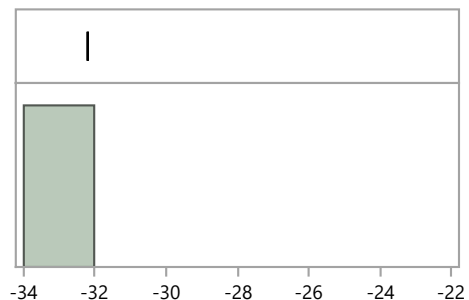
100.0%	maximum	-7.6
99.5%		-7.6
97.5%		-7.6
90.0%		-7.6
75.0%	quartile	-7.6
50.0%	median	-7.6
25.0%	quartile	-7.6
10.0%		-7.6
2.5%		-7.6
0.5%		-7.6
0.0%	minimum	-7.6

**Summary Statistics**

Mean	-7.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Method=Americium-241 No preparation - analyzed as received**

**Bias**



**Quantiles**

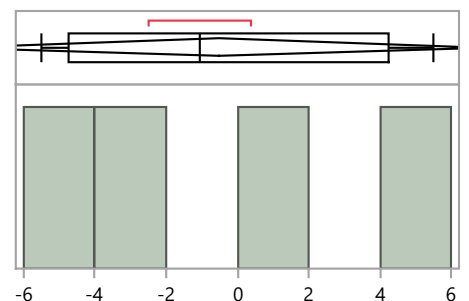
100.0%	maximum	-32.2
99.5%		-32.2
97.5%		-32.2
90.0%		-32.2
75.0%	quartile	-32.2
50.0%	median	-32.2
25.0%	quartile	-32.2
10.0%		-32.2
2.5%		-32.2
0.5%		-32.2
0.0%	minimum	-32.2

**Summary Statistics**

Mean	-32.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Method=Americium-241 Other**

**Bias**



**Quantiles**

100.0%	maximum	5.5
99.5%		5.5
97.5%		5.5
90.0%		5.5
75.0%	quartile	4.2
50.0%	median	-1.1
25.0%	quartile	-4.8
10.0%		-5.5
2.5%		-5.5
0.5%		-5.5
0.0%	minimum	-5.5

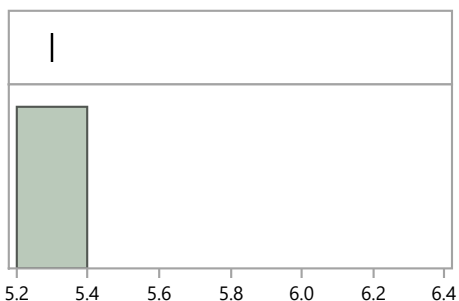
**Summary Statistics**

Mean	-0.5
Std Dev	4.7
Std Err Mean	2.3
Upper 95% Mean	6.9
Lower 95% Mean	-8.0
N	4.0

**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Cesium-134 EPA 901.1, Gamma Emitting, 600/4-80-032**

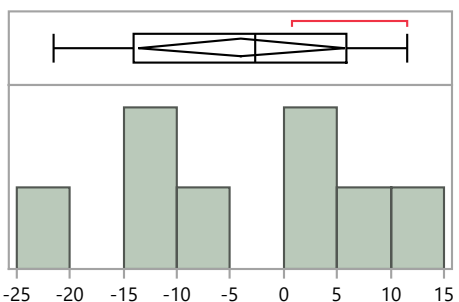
**Bias**



Quantiles			Summary Statistics	
100.0%	maximum	5.3	Mean	5.3
99.5%		5.3	Std Dev	.
97.5%		5.3	Std Err Mean	.
90.0%		5.3	Upper 95% Mean	.
75.0%	quartile	5.3	Lower 95% Mean	.
50.0%	median	5.3	N	1.0
25.0%	quartile	5.3		
10.0%		5.3		
2.5%		5.3		
0.5%		5.3		
0.0%	minimum	5.3		

**Distributions Analyte\_Method=Cesium-134 No preparation - analyzed as received**

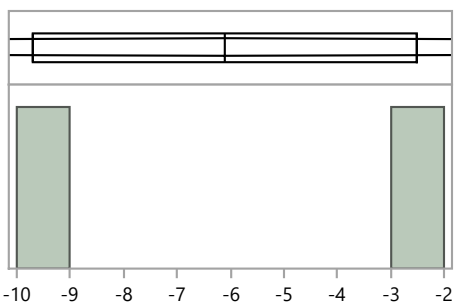
**Bias**



Quantiles			Summary Statistics	
100.0%	maximum	11.6	Mean	-4.0
99.5%		11.6	Std Dev	11.6
97.5%		11.6	Std Err Mean	4.1
90.0%		11.6	Upper 95% Mean	5.7
75.0%	quartile	5.8	Lower 95% Mean	-13.7
50.0%	median	-2.7	N	8.0
25.0%	quartile	-14.1		
10.0%		-21.5		
2.5%		-21.5		
0.5%		-21.5		
0.0%	minimum	-21.5		

**Distributions Analyte\_Method=Cesium-134 Other**

**Bias**

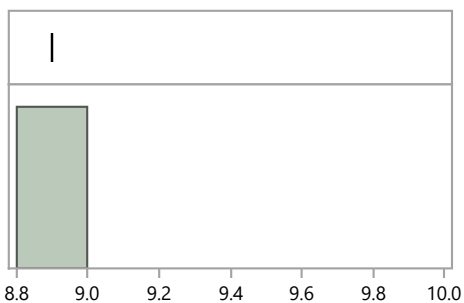


Quantiles			Summary Statistics	
100.0%	maximum	-2.5	Mean	-6.1
99.5%		-2.5	Std Dev	5.1
97.5%		-2.5	Std Err Mean	3.6
90.0%		-2.5	Upper 95% Mean	39.6
75.0%	quartile	-2.5	Lower 95% Mean	-51.8
50.0%	median	-6.1	N	2.0
25.0%	quartile	-9.7		
10.0%		-9.7		
2.5%		-9.7		
0.5%		-9.7		
0.0%	minimum	-9.7		

**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Cobalt-57 EPA 901.1, Gamma Emitting, 600/4-80-032**

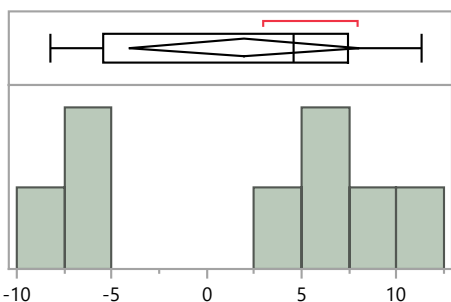
**Bias**



Quantiles		Summary Statistics		
100.0%	maximum	8.9	Mean	8.9
99.5%		8.9	Std Dev	.
97.5%		8.9	Std Err Mean	.
90.0%		8.9	Upper 95% Mean	.
75.0%	quartile	8.9	Lower 95% Mean	.
50.0%	median	8.9	N	1.0
25.0%	quartile	8.9		
10.0%		8.9		
2.5%		8.9		
0.5%		8.9		
0.0%	minimum	8.9		

**Distributions Analyte\_Method=Cobalt-57 No preparation - analyzed as received**

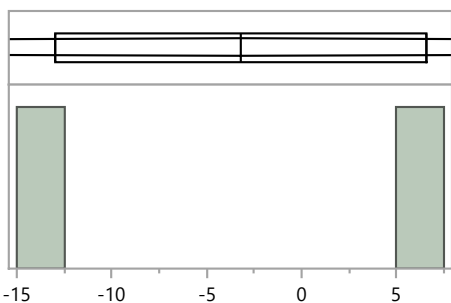
**Bias**



Quantiles		Summary Statistics		
100.0%	maximum	11.3	Mean	2.0
99.5%		11.3	Std Dev	7.2
97.5%		11.3	Std Err Mean	2.6
90.0%		11.3	Upper 95% Mean	8.0
75.0%	quartile	7.5	Lower 95% Mean	-4.1
50.0%	median	4.6	N	8.0
25.0%	quartile	-5.4		
10.0%		-8.2		
2.5%		-8.2		
0.5%		-8.2		
0.0%	minimum	-8.2		

**Distributions Analyte\_Method=Cobalt-57 Other**

**Bias**

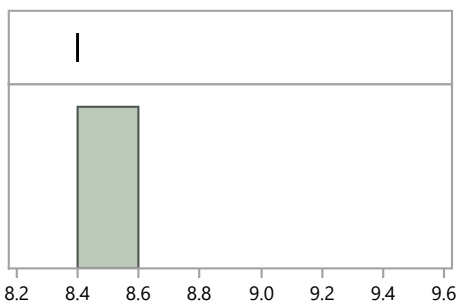


Quantiles		Summary Statistics		
100.0%	maximum	6.6	Mean	-3.2
99.5%		6.6	Std Dev	13.9
97.5%		6.6	Std Err Mean	9.8
90.0%		6.6	Upper 95% Mean	121.3
75.0%	quartile	6.6	Lower 95% Mean	-127.7
50.0%	median	-3.2	N	2.0
25.0%	quartile	-13.0		
10.0%		-13.0		
2.5%		-13.0		
0.5%		-13.0		
0.0%	minimum	-13.0		

### MaSU Distribution by Preparation Method

#### Distributions Analyte\_Method=Cobalt-60 EPA 901.1, Gamma Emitting, 600/4-80-032

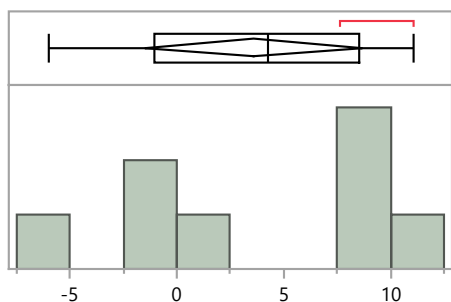
##### Bias



Quantiles		Summary Statistics		
100.0%	maximum	8.4	Mean	8.4
99.5%		8.4	Std Dev	.
97.5%		8.4	Std Err Mean	.
90.0%		8.4	Upper 95% Mean	.
75.0%	quartile	8.4	Lower 95% Mean	.
50.0%	median	8.4	N	1.0
25.0%	quartile	8.4		
10.0%		8.4		
2.5%		8.4		
0.5%		8.4		
0.0%	minimum	8.4		

#### Distributions Analyte\_Method=Cobalt-60 No preparation - analyzed as received

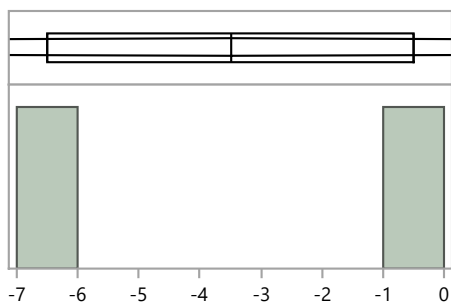
##### Bias



Quantiles		Summary Statistics		
100.0%	maximum	11.1	Mean	3.6
99.5%		11.1	Std Dev	6.1
97.5%		11.1	Std Err Mean	2.2
90.0%		11.1	Upper 95% Mean	8.7
75.0%	quartile	8.6	Lower 95% Mean	-1.5
50.0%	median	4.3	N	8.0
25.0%	quartile	-1.1		
10.0%		-6.0		
2.5%		-6.0		
0.5%		-6.0		
0.0%	minimum	-6.0		

#### Distributions Analyte\_Method=Cobalt-60 Other

##### Bias

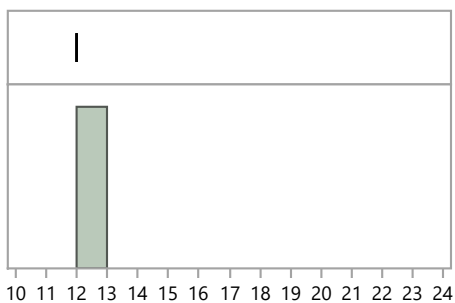


Quantiles		Summary Statistics		
100.0%	maximum	-0.5	Mean	-3.5
99.5%		-0.5	Std Dev	4.2
97.5%		-0.5	Std Err Mean	3.0
90.0%		-0.5	Upper 95% Mean	34.6
75.0%	quartile	-0.5	Lower 95% Mean	-41.6
50.0%	median	-3.5	N	2.0
25.0%	quartile	-6.5		
10.0%		-6.5		
2.5%		-6.5		
0.5%		-6.5		
0.0%	minimum	-6.5		

### MaSU Distribution by Preparation Method

#### Distributions Analyte\_Method=Manganese-54 EPA 901.1, Gamma Emitting, 600/4-80-032

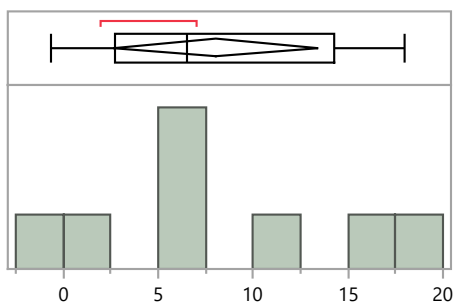
##### Bias



Quantiles			Summary Statistics	
100.0%	maximum	12.0	Mean	12.0
99.5%		12.0	Std Dev	.
97.5%		12.0	Std Err Mean	.
90.0%		12.0	Upper 95% Mean	.
75.0%	quartile	12.0	Lower 95% Mean	.
50.0%	median	12.0	N	1.0
25.0%	quartile	12.0		
10.0%		12.0		
2.5%		12.0		
0.5%		12.0		
0.0%	minimum	12.0		

#### Distributions Analyte\_Method=Manganese-54 No preparation - analyzed as received

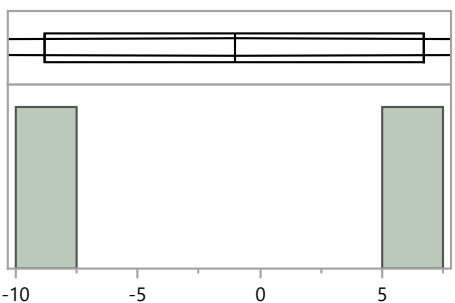
##### Bias



Quantiles			Summary Statistics	
100.0%	maximum	18.0	Mean	8.1
99.5%		18.0	Std Dev	6.4
97.5%		18.0	Std Err Mean	2.3
90.0%		18.0	Upper 95% Mean	13.4
75.0%	quartile	14.3	Lower 95% Mean	2.7
50.0%	median	6.5	N	8.0
25.0%	quartile	2.8		
10.0%		-0.6		
2.5%		-0.6		
0.5%		-0.6		
0.0%	minimum	-0.6		

#### Distributions Analyte\_Method=Manganese-54 Other

##### Bias



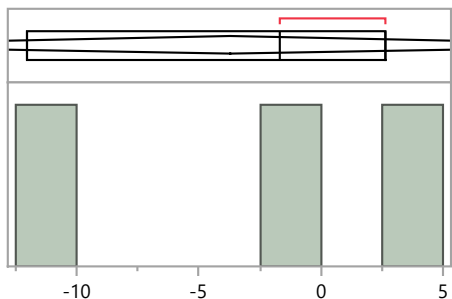
Quantiles			Summary Statistics	
100.0%	maximum	6.7	Mean	-1.1
99.5%		6.7	Std Dev	11.0
97.5%		6.7	Std Err Mean	7.8
90.0%		6.7	Upper 95% Mean	97.4
75.0%	quartile	6.7	Lower 95% Mean	-99.5
50.0%	median	-1.1	N	2.0
25.0%	quartile	-8.8		
10.0%		-8.8		
2.5%		-8.8		
0.5%		-8.8		
0.0%	minimum	-8.8		



**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Plutonium-238 Coprecipitation, acidified**

**Bias**



**Quantiles**

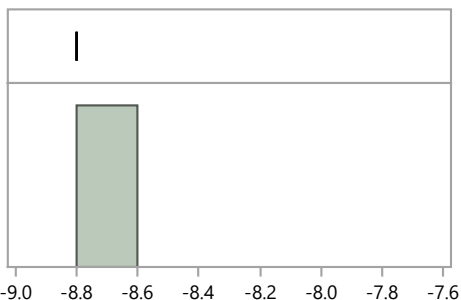
100.0%	maximum	2.6
99.5%		2.6
97.5%		2.6
90.0%		2.6
75.0%	quartile	2.6
50.0%	median	-1.7
25.0%	quartile	-12.0
10.0%		-12.0
2.5%		-12.0
0.5%		-12.0
0.0%	minimum	-12.0

**Summary Statistics**

Mean	-3.7
Std Dev	7.5
Std Err Mean	4.3
Upper 95% Mean	14.9
Lower 95% Mean	-22.3
N	3.0

**Distributions Analyte\_Method=Plutonium-238 Coprecipitation, straight**

**Bias**



**Quantiles**

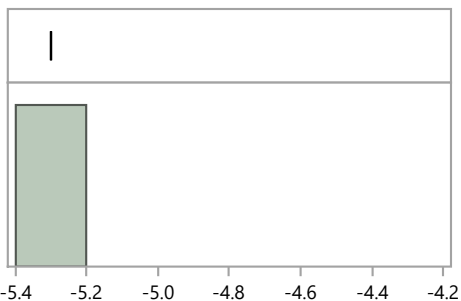
100.0%	maximum	-8.8
99.5%		-8.8
97.5%		-8.8
90.0%		-8.8
75.0%	quartile	-8.8
50.0%	median	-8.8
25.0%	quartile	-8.8
10.0%		-8.8
2.5%		-8.8
0.5%		-8.8
0.0%	minimum	-8.8

**Summary Statistics**

Mean	-8.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Method=Plutonium-238 Evaporation, acidified**

**Bias**



**Quantiles**

100.0%	maximum	-5.3
99.5%		-5.3
97.5%		-5.3
90.0%		-5.3
75.0%	quartile	-5.3
50.0%	median	-5.3
25.0%	quartile	-5.3
10.0%		-5.3
2.5%		-5.3
0.5%		-5.3
0.0%	minimum	-5.3

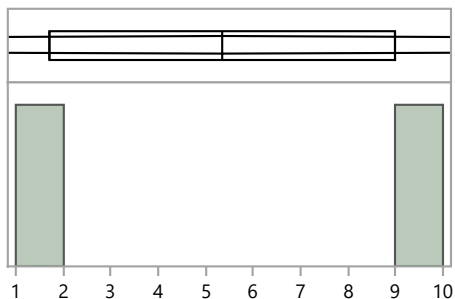
**Summary Statistics**

Mean	-5.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

### MaSU Distribution by Preparation Method

#### Distributions Analyte\_Method=Plutonium-238 Ion Exchange Chromatography / Ion Chromatography

Bias



#### Quantiles

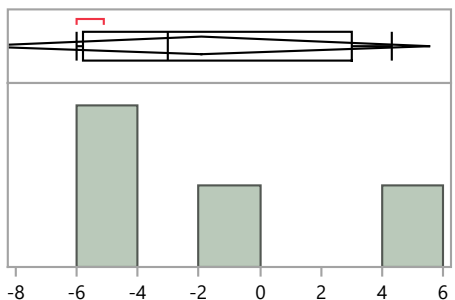
100.0%	maximum	9.0
99.5%		9.0
97.5%		9.0
90.0%		9.0
75.0%	quartile	9.0
50.0%	median	5.4
25.0%	quartile	1.7
10.0%		1.7
2.5%		1.7
0.5%		1.7
0.0%	minimum	1.7

#### Summary Statistics

Mean	5.4
Std Dev	5.2
Std Err Mean	3.7
Upper 95% Mean	51.7
Lower 95% Mean	-41.0
N	2.0

#### Distributions Analyte\_Method=Plutonium-238 Other

Bias



#### Quantiles

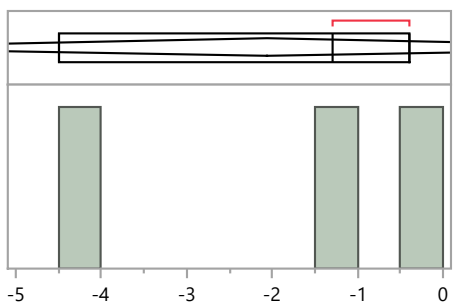
100.0%	maximum	4.3
99.5%		4.3
97.5%		4.3
90.0%		4.3
75.0%	quartile	3.0
50.0%	median	-3.0
25.0%	quartile	-5.8
10.0%		-6.0
2.5%		-6.0
0.5%		-6.0
0.0%	minimum	-6.0

#### Summary Statistics

Mean	-1.9
Std Dev	4.7
Std Err Mean	2.4
Upper 95% Mean	5.6
Lower 95% Mean	-9.4
N	4.0

#### Distributions Analyte\_Method=Plutonium-239/240 Coprecipitation, acidified

Bias



#### Quantiles

100.0%	maximum	-0.4
99.5%		-0.4
97.5%		-0.4
90.0%		-0.4
75.0%	quartile	-0.4
50.0%	median	-1.3
25.0%	quartile	-4.5
10.0%		-4.5
2.5%		-4.5
0.5%		-4.5
0.0%	minimum	-4.5

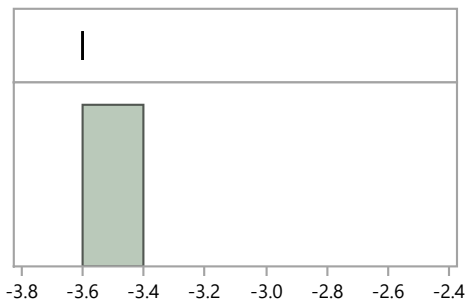
#### Summary Statistics

Mean	-2.1
Std Dev	2.2
Std Err Mean	1.2
Upper 95% Mean	3.3
Lower 95% Mean	-7.4
N	3.0

**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Plutonium-239/240 Coprecipitation, straight**

**Bias**



**Quantiles**

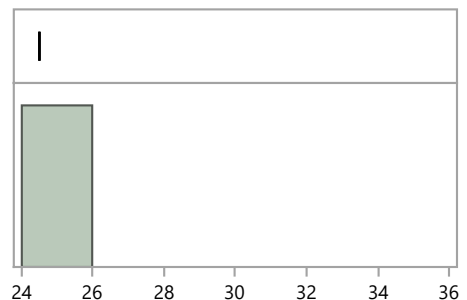
100.0%	maximum	-3.6
99.5%		-3.6
97.5%		-3.6
90.0%		-3.6
75.0%	quartile	-3.6
50.0%	median	-3.6
25.0%	quartile	-3.6
10.0%		-3.6
2.5%		-3.6
0.5%		-3.6
0.0%	minimum	-3.6

**Summary Statistics**

Mean	-3.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Method=Plutonium-239/240 Evaporation, acidified**

**Bias**



**Quantiles**

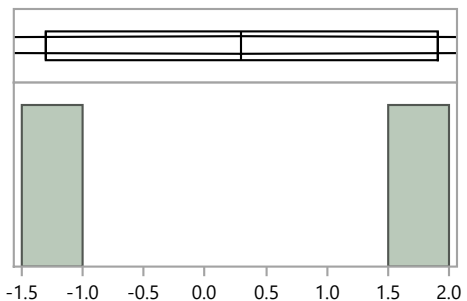
100.0%	maximum	24.5
99.5%		24.5
97.5%		24.5
90.0%		24.5
75.0%	quartile	24.5
50.0%	median	24.5
25.0%	quartile	24.5
10.0%		24.5
2.5%		24.5
0.5%		24.5
0.0%	minimum	24.5

**Summary Statistics**

Mean	24.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Method=Plutonium-239/240 Ion Exchange Chromatography / Ion Chromatography**

**Bias**



**Quantiles**

100.0%	maximum	1.9
99.5%		1.9
97.5%		1.9
90.0%		1.9
75.0%	quartile	1.9
50.0%	median	0.3
25.0%	quartile	-1.3
10.0%		-1.3
2.5%		-1.3
0.5%		-1.3
0.0%	minimum	-1.3

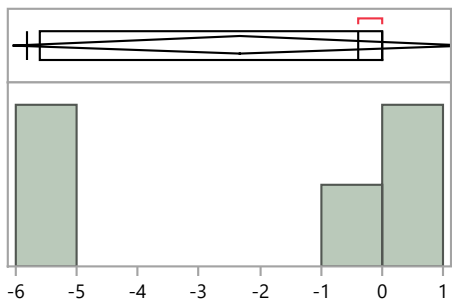
**Summary Statistics**

Mean	0.3
Std Dev	2.3
Std Err Mean	1.6
Upper 95% Mean	20.6
Lower 95% Mean	-20.0
N	2.0

### MaSU Distribution by Preparation Method

#### Distributions Analyte\_Method=Plutonium-239/240 Other

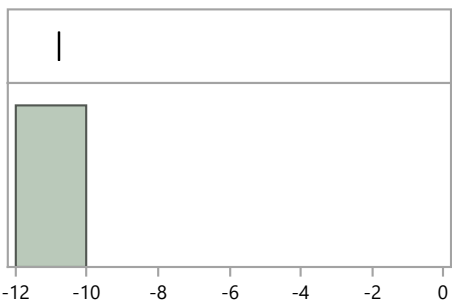
##### Bias



Quantiles			Summary Statistics	
100.0%	maximum	0.0	Mean	-2.3
99.5%		0.0	Std Dev	3.0
97.5%		0.0	Std Err Mean	1.3
90.0%		0.0	Upper 95% Mean	1.4
75.0%	quartile	0.0	Lower 95% Mean	-6.0
50.0%	median	-0.4	N	5.0
25.0%	quartile	-5.6		
10.0%		-5.8		
2.5%		-5.8		
0.5%		-5.8		
0.0%	minimum	-5.8		

#### Distributions Analyte\_Method=Strontium-89 Ion Exchange Chromatography / Ion Chromatography

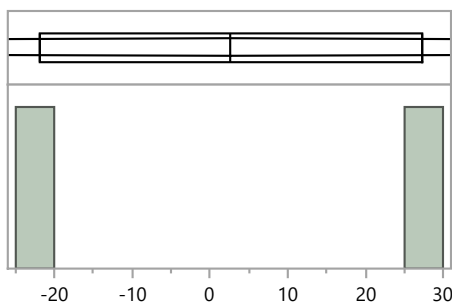
##### Bias



Quantiles			Summary Statistics	
100.0%	maximum	-10.8	Mean	-10.8
99.5%		-10.8	Std Dev	.
97.5%		-10.8	Std Err Mean	.
90.0%		-10.8	Upper 95% Mean	.
75.0%	quartile	-10.8	Lower 95% Mean	.
50.0%	median	-10.8	N	1.0
25.0%	quartile	-10.8		
10.0%		-10.8		
2.5%		-10.8		
0.5%		-10.8		
0.0%	minimum	-10.8		

#### Distributions Analyte\_Method=Strontium-89 Other

##### Bias

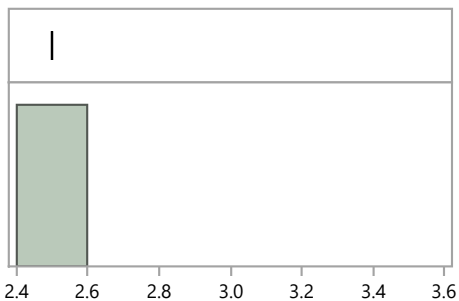


Quantiles			Summary Statistics	
100.0%	maximum	27.3	Mean	2.7
99.5%		27.3	Std Dev	34.8
97.5%		27.3	Std Err Mean	24.6
90.0%		27.3	Upper 95% Mean	315.3
75.0%	quartile	27.3	Lower 95% Mean	-309.9
50.0%	median	2.7	N	2.0
25.0%	quartile	-21.9		
10.0%		-21.9		
2.5%		-21.9		
0.5%		-21.9		
0.0%	minimum	-21.9		

**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Strontium-90 Ion Exchange Chromatography / Ion Chromatography**

**Bias**



**Quantiles**

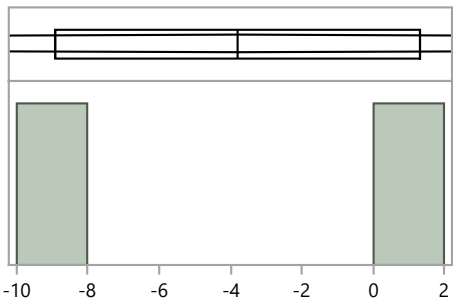
100.0%	maximum	2.5
99.5%		2.5
97.5%		2.5
90.0%		2.5
75.0%	quartile	2.5
50.0%	median	2.5
25.0%	quartile	2.5
10.0%		2.5
2.5%		2.5
0.5%		2.5
0.0%	minimum	2.5

**Summary Statistics**

Mean	2.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**Distributions Analyte\_Method=Strontium-90 Other**

**Bias**



**Quantiles**

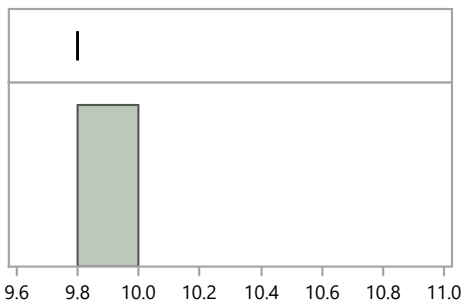
100.0%	maximum	1.3
99.5%		1.3
97.5%		1.3
90.0%		1.3
75.0%	quartile	1.3
50.0%	median	-3.8
25.0%	quartile	-8.9
10.0%		-8.9
2.5%		-8.9
0.5%		-8.9
0.0%	minimum	-8.9

**Summary Statistics**

Mean	-3.8
Std Dev	7.2
Std Err Mean	5.1
Upper 95% Mean	61.0
Lower 95% Mean	-68.6
N	2.0

**Distributions Analyte\_Method=Zinc-65 EPA 901.1, Gamma Emitting, 600/4-80-032**

**Bias**



**Quantiles**

100.0%	maximum	9.8
99.5%		9.8
97.5%		9.8
90.0%		9.8
75.0%	quartile	9.8
50.0%	median	9.8
25.0%	quartile	9.8
10.0%		9.8
2.5%		9.8
0.5%		9.8
0.0%	minimum	9.8

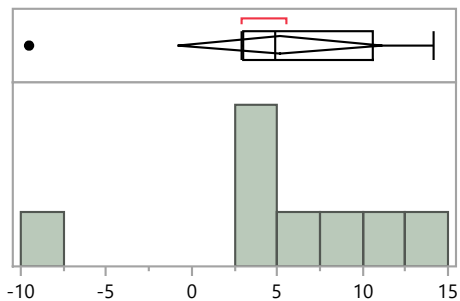
**Summary Statistics**

Mean	9.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

**MaSU Distribution by Preparation Method**

**Distributions Analyte\_Method=Zinc-65 No preparation - analyzed as received**

**Bias**



**Quantiles**

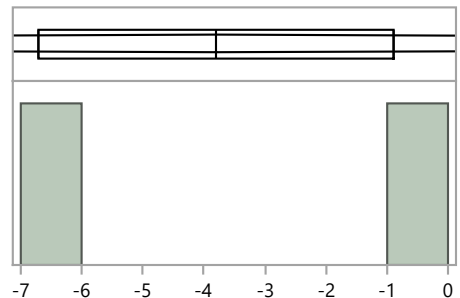
100.0%	maximum	14.1
99.5%		14.1
97.5%		14.1
90.0%		14.1
75.0%	quartile	10.6
50.0%	median	4.9
25.0%	quartile	3.0
10.0%		-9.5
2.5%		-9.5
0.5%		-9.5
0.0%	minimum	-9.5

**Summary Statistics**

Mean	5.2
Std Dev	7.2
Std Err Mean	2.5
Upper 95% Mean	11.1
Lower 95% Mean	-0.8
N	8.0

**Distributions Analyte\_Method=Zinc-65 Other**

**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	-3.8
25.0%	quartile	-6.7
10.0%		-6.7
2.5%		-6.7
0.5%		-6.7
0.0%	minimum	-6.7

**Summary Statistics**

Mean	-3.8
Std Dev	4.1
Std Err Mean	2.9
Upper 95% Mean	33.0
Lower 95% Mean	-40.6
N	2.0