

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.

RdF52 Participating Laboratories

Lab Code	Lab Name	Matrix Code
ADEM01	Alabama Department of Environmental Management	RdF
ADFC99	Abu Dhabi Quality and Conformity Council-Central Testing Lab	RdF
AFOH01	USAFSAM/OEA	RdF
AMEC99	Amentum Clean Energy Ltd	RdF
ANLB01	Argonne National Laboratory	RdF
ARGO01	Idaho National Laboratory	RdF
ARPL01	Analytical Support Operations - Radiochemical Processing Lab	RdF
ARSL01	ARS	RdF
BSCE99	Supreme Council for Environment	RdF
CDHS01	California Department of Public Health	RdF
CESL01	Lawrence Livermore National Laboratory - EMRL	RdF
CMRC01	Carlsbad Environmental Monitoring and Research Center	RdF
COPS99	Health Canada Radiation Protection Bureau	RdF
DEHS01	Department of Environmental Health & Safety	RdF
DINL99	Departamento Ingeniería Energética	RdF
ERCL01	Washington State Public Health Laboratories	RdF
ERHD99	National Monitoring Section, Radiation Protection Bureau, Health Canada	RdF
FDHE01	Florida Dept of Health Environmental Laboratory	RdF
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab	RdF
FNAL01	Fermi National Accelerator Laboratory (FermiLab)	RdF
GENE01	GEL Laboratories, LLC	RdF
GPCL01	Georgia Power Company Environmental Laboratory	RdF
HECR01	SC Department of Environmental Services	RdF
HPAC99	UKHSA, RCE Glasgow	RdF
HPAL01	Los Alamos National Laboratory	RdF
IEMA01	Illinois Emergency Management Agency Radiochemistry Laboratory	RdF
JAEC99	Research Laboratories and Information Directorate	RdF
JLNN01	Jefferson Laboratory	RdF
JNRC99	Energy and Mineral Regulatory Commission	RdF
LAWR01	LAWRENCE BERKELEY NATIONAL LABORATORY	RdF
LOCK03	Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory	RdF
MART01	Fluor-BWXT Portsmouth LLC, Analytical Laboratory	RdF
MART03	Radioactive Material Analysis Laboratory	RdF
MDPH01	MDPH-Division of Radiation Control	RdF
MNDH01	Minnesota Department of Health, Public Health Lab. Division	RdF
NARL01	National Analytical Radiation Environmental Laboratory	RdF
NESI01	BWXT-Radioisotope & Analytical Chemistry Laboratory	RdF
NJDH01	New Jersey Dept. of Health, ECLS	RdF
NRLL99	Environmental Radioactivity - National Centre for Radiation Science	RdF
ODHL01	Ohio Department of Health Laboratory	RdF
RAVR99	Radiactividad Ambiental y Vigilancia Radiologica	RdF
RPSC01	Radiation Protection Service	RdF
SEML01	SRS Environmental Monitoring Laboratory	RdF
SOUT01	Southwest Research Institute	RdF

SRPD01	Sandia National Laboratories, Radiation Protection Sample Diagnostics	RdF
TDHL01	Texas Department of State Health Services Laboratory	RdF
TELE02	Microbac Laboratories Inc. - Northbrook	RdF
TMAO01	EBERLINE Analytical Corporation	RdF
WIPH01	WI, DPH, Radiation Protection Section	RdF
WIPP01	WIPP Laboratories	RdF
WMGS01	Westinghouse (Waltz Mill Gamma Spectroscopy Lab)	RdF
WSHL01	Wisconsin State Laboratory of Hygiene	RdF
WSTP99	Cavendish Nuclear Limited	RdF
WVDP01	WVDP Environmental Laboratory	RdF
YPGA01	US Army Yuma Proving Ground / Material Analysis Lab	RdF

Laboratories Not Reporting

Lab Code	Lab Name	Matrix Code
ASUK99	AWE (Aldermaston)	RdF
IAEA99	International Atomic Energy Agency	RdF
ISUE01	ISU Environmental Monitoring Laboratory	RdF
STRL01	South Texas Project Radiological Laboratory	RdF

Study Reference Values

MAPEP-25-RdF52: Radiological air filter

Radiological Reference Date: 02/01/2025

Inorganic		Unit: (ug/sample)
Analyte	Reference Value	Reference Uncertainty
Uranium-235	0.039	0.002
Uranium-238	5.36	0.17
Uranium-Total	5.40	0.17

Radiological		Unit: (Bq/sample)
Analyte	Reference Value	Reference Uncertainty
Americium-241	0.0437	0.0011
Cesium-134	0.340	0.009
Cesium-137	0.678	0.017
Cobalt-60	0.486	0.013
Plutonium-238	0.0216	0.0007
Plutonium-239/240	0.0141	0.0003
Strontium-90	0.502	0.013
Uranium-234	0.064	0.002
Uranium-238	0.067	0.002

Sample Statistical Summary

MAPEP-25-RdF52: Radiological air filter

Radiological Reference Date: 02/01/2025

Inorganic					Units: (ug/sample)		
Analyte	T(1)	A(2)	Grand ⁽³⁾ Mean	Standard Deviation	Reference Value	Reference Uncertainty	Acceptance Range
Uranium-235	6	6	0.038	0.002	0.039	0.002	0.027 - 0.051
Uranium-238	7	6	5.34	0.27	5.36	0.17	3.75 - 6.97
Uranium-Total	5	5			5.40	0.17	3.78 - 7.02

Radiological					Units: (Bq/sample)		
Analyte	T(1)	A(2)	Grand ⁽³⁾ Mean	Standard Deviation	Reference Value	Reference Uncertainty	Acceptance Range
Americium-241	31	28	0.0427	0.0052	0.0437	0.0011	0.0306 - 0.0568
Cesium-134	51	48	0.322	0.040	0.340	0.009	0.238 - 0.442
Cesium-137	53	50	0.661	0.060	0.678	0.017	0.475 - 0.881
Cobalt-57	49	24					False Positive Test
Cobalt-60	53	50	0.462	0.050	0.486	0.013	0.340 - 0.632
Manganese-54	45	44					False Positive Test
Plutonium-238	27	23	0.0224	0.0026	0.0216	0.0007	0.0151 - 0.0281
Plutonium-239/240	27	20	0.0151	0.0017	0.0141	0.0003	0.0099 - 0.0183
Strontium-90	22	17	0.468	0.049	0.502	0.013	0.351 - 0.653
Uranium-234	27	24	0.066	0.006	0.064	0.002	0.045 - 0.083
Uranium-238	28	25	0.067	0.007	0.067	0.002	0.047 - 0.087
Zinc-65	45	39					False Positive Test

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:

NOT ACCEPTABLE.....RP < 2%

ACCEPTABLE.....2% ≤ RP ≤ 15%

ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Flag Summary Report

MAPEP-25-RdF52: Radiological air filter

Radiological Reference Date: 02/01/2025

Inorganic				
Analyte	A	W	RW	N
Uranium-Total	5			
Uranium-235	6			
Uranium-238	6			1

Radiological				
Analyte	A	W	RW	N
Americium-241	27	1		3
Cesium-134	42	6		3
Cesium-137	49	1		3
Cobalt-57	24			26
Cobalt-60	45	5		3
Manganese-54	44			3
Plutonium-238	20	3		4
Plutonium-239/240	17	3		7
Strontium-90	16	1		5
Uranium-234	22	2		3
Uranium-238	24	1		3
Zinc-65	39			7



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

Laboratory Results For MAPEP Series 52
(ADEM01) Alabama Department of Environmental Management
1350 Coliseum Blvd.
Montgomery, AL 36110

Inorganic						Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value
Uranium-235	NR	0.039				0.027 - 0.051	
Uranium-238	NR	5.36				3.75 - 6.97	
Uranium-Total	NR	5.40				3.78 - 7.02	

Radiological						Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value
Americium-241	NR	0.0437				0.0306 - 0.0568	
Cesium-134	0.384	0.340	A		12.9	0.238 - 0.442	0.0282
Cesium-137	1.01	0.678	N		49.0	0.475 - 0.881	0.062
Cobalt-57	1.05		N	(1)		False Positive Test	0.0441
Cobalt-60	0.645	0.486	N		32.7	0.340 - 0.632	0.038
Manganese-54	NR		N	(11)		False Positive Test	
Plutonium-238	NR	0.0216				0.0151 - 0.0281	
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183	
Strontium-90	NR	0.502				0.351 - 0.653	
Uranium-234	NR	0.064				0.045 - 0.083	
Uranium-238	NR	0.067				0.047 - 0.087	
Zinc-65	NR		N	(11)		False Positive Test	

Results Flags:

Radiological Reference Date: February 1, 2025

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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52

(ADFC99) Abu Dhabi Quality and Conformity Council-Central Testing Lab

Radiation Lab

Abu Dhabi, Abu Dhabi 853

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.33	0.340	A		-2.9	0.238 - 0.442	0.04	A
Cesium-137	0.70	0.678	A		3.2	0.475 - 0.881	0.08	A
Cobalt-57	0.01		A			False Positive Test	0.01	
Cobalt-60	0.49	0.486	A		0.8	0.340 - 0.632	0.04	A
Manganese-54	0.01		A			False Positive Test	0.01	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502	N	(28)		0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.01		A			False Positive Test	0.01	

Radiological Reference Date: February 1, 2025

Results Flags:

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The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

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

Laboratory Results For MAPEP Series 52

(AFOH01) USAFSAM/OEA

2510 Fifth Street, Area B

Wright-Patterson AFB, OH 45433-7913

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0396	0.0437	A		-9.4	0.0306 - 0.0568	0.0026	A
Cesium-134	0.274	0.340	A		-19.4	0.238 - 0.442	0.069	W
Cesium-137	0.71	0.678	A		4.7	0.475 - 0.881	0.05	A
Cobalt-57	0.04		A			False Positive Test	0.14	
Cobalt-60	0.42	0.486	A		-13.6	0.340 - 0.632	0.06	A
Manganese-54	0.03		A			False Positive Test	0.03	
Plutonium-238	0.0232	0.0216	A		7.4	0.0151 - 0.0281	0.0021	A
Plutonium-239/240	0.0153	0.0141	A		8.5	0.0099 - 0.0183	0.0017	A
Strontium-90	0.451	0.502	A		-10.2	0.351 - 0.653	0.026	A
Uranium-234	0.0594	0.064	A		-7.2	0.045 - 0.083	0.0041	A
Uranium-238	0.0638	0.067	A		-4.8	0.047 - 0.087	0.0039	A
Zinc-65	0.2		A			False Positive Test	0.2	

Radiological Reference Date: February 1, 2025

Results Flags:

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

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

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

Laboratory Results For MAPEP Series 52

(AMEC99) Amentum Clean Energy Ltd

612 Faraday Street

Birchwood Park, Warrington WA3 6GN

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0471	0.0437	A		7.8	0.0306 - 0.0568	0.0067	A
Cesium-134	0.337	0.340	A		-0.9	0.238 - 0.442	0.031	A
Cesium-137	0.761	0.678	A		12.2	0.475 - 0.881	0.039	A
Cobalt-57	0.153		A			False Positive Test	0.084	
Cobalt-60	0.624	0.486	W		28.4	0.340 - 0.632	0.039	A
Manganese-54	0.003		A			False Positive Test	0.016	
Plutonium-238	0.0277	0.0216	W		28.2	0.0151 - 0.0281	0.0028	A
Plutonium-239/240	0.0216	0.0141	N		53.2	0.0099 - 0.0183	0.0025	A
Strontium-90	NR	0.502	N	(28)		0.351 - 0.653		
Uranium-234	0.0733	0.064	A		14.5	0.045 - 0.083	0.0039	A
Uranium-238	0.0644	0.067	A		-3.9	0.047 - 0.087	0.0036	A
Zinc-65	0.042		A			False Positive Test	0.044	

Radiological Reference Date: February 1, 2025

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NR = Not Reported

Uncertainty Flags:

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

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

Laboratory Results For MAPEP Series 52
(ANLB01) Argonne National Laboratory
9700 S. Cass Ave
Argonne, IL 60439

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0432	0.0437	A		-1.1	0.0306 - 0.0568	0.004	A
Cesium-134	0.342	0.340	A		0.6	0.238 - 0.442	0.04	A
Cesium-137	0.672	0.678	A		-0.9	0.475 - 0.881	0.037	A
Cobalt-57	0.575		N	(1)		False Positive Test	0.055	
Cobalt-60	0.490	0.486	A		0.8	0.340 - 0.632	0.026	A
Manganese-54	0.02		A			False Positive Test	0.016	
Plutonium-238	0.021	0.0216	A		-2.8	0.0151 - 0.0281	0.003	A
Plutonium-239/240	0.014	0.0141	A		-0.7	0.0099 - 0.0183	0.003	W
Strontium-90	0.463	0.502	A		-7.8	0.351 - 0.653	0.016	A
Uranium-234	0.058	0.064	A		-9.4	0.045 - 0.083	0.005	A
Uranium-238	0.056	0.067	A		-16.4	0.047 - 0.087	0.005	A
Zinc-65	-0.001		A			False Positive Test	0.045	

Radiological Reference Date: February 1, 2025

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

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

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

Laboratory Results For MAPEP Series 52
(ARGO01) Idaho National Laboratory
INL, Materials and Fuels Complex
Idaho Falls, ID 83415

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.216	0.340	N		-36.5	0.238 - 0.442	0.015	A
Cesium-137	0.601	0.678	A		-11.4	0.475 - 0.881	0.042	A
Cobalt-57	0.074		A			False Positive Test	0.074	
Cobalt-60	0.429	0.486	A		-11.7	0.340 - 0.632	0.034	A
Manganese-54	0.111		A			False Positive Test	0.111	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.370		A			False Positive Test	0.370	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

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

Laboratory Results For MAPEP Series 52

(ARPL01) Analytical Support Operations - Radiochemical Processing Lab

PO Box 999

Richland, WA 99354

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.044	0.0437	A		0.7	0.0306 - 0.0568	0.003	A
Cesium-134	0.337	0.340	A		-0.9	0.238 - 0.442	0.009	A
Cesium-137	0.64	0.678	A		-5.6	0.475 - 0.881	0.03	A
Cobalt-57	0.087		A			False Positive Test	0.161	
Cobalt-60	0.461	0.486	A		-5.1	0.340 - 0.632	0.030	A
Manganese-54	0.012		A			False Positive Test	0.020	
Plutonium-238	0.019	0.0216	A		-12.0	0.0151 - 0.0281	0.003	W
Plutonium-239/240	0.022	0.0141	N		56.0	0.0099 - 0.0183	0.003	A
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	0.061	0.064	A		-4.7	0.045 - 0.083	0.022	N
Uranium-238	0.067	0.067	A		0.0	0.047 - 0.087	0.005	A
Zinc-65	0.445		A			False Positive Test	0.423	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52

(ARSL01) ARS

2609 North River Road

Port Allen, LA 70767

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437	N	(28)		0.0306 - 0.0568		
Cesium-134	0.393	0.340	A		15.6	0.238 - 0.442	0.025	A
Cesium-137	0.913	0.678	N		34.7	0.475 - 0.881	0.04	A
Cobalt-57	0.027		A			False Positive Test	0.037	
Cobalt-60	0.662	0.486	N		36.2	0.340 - 0.632	0.031	A
Manganese-54	-0.01		A			False Positive Test	0.032	
Plutonium-238	NR	0.0216	N	(28)		0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141	N	(28)		0.0099 - 0.0183		
Strontium-90	NR	0.502	N	(28)		0.351 - 0.653		
Uranium-234	NR	0.064	N	(28)		0.045 - 0.083		
Uranium-238	NR	0.067	N	(28)		0.047 - 0.087		
Zinc-65	-0.073		A			False Positive Test	0.085	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(BSCE99) Supreme Council for Environment
P. O. Box 18233
Manama, Manama 18233

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	3.62e-2	0.0437	A		-17.2	0.0306 - 0.0568	4.82e-3	A
Cesium-134	3.09e-1	0.340	A		-9.1	0.238 - 0.442	1.86e-2	A
Cesium-137	6.01e-1	0.678	A		-11.4	0.475 - 0.881	5.09e-2	A
Cobalt-57	2.22		N	(1)		False Positive Test	0.11	
Cobalt-60	4.24e-1	0.486	A		-12.8	0.340 - 0.632	2.44e-2	A
Manganese-54	NR					False Positive Test		
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(CDHS01) California Department of Public Health
Drinking Water & Radiation Lab.
Richmond, CA 94804-6403

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0500	0.0437	A		14.4	0.0306 - 0.0568	0.00599	A
Cesium-134	0.338	0.340	A		-0.6	0.238 - 0.442	0.0190	A
Cesium-137	0.695	0.678	A		2.5	0.475 - 0.881	0.0286	A
Cobalt-57	0.625		N	(1)		False Positive Test	0.0172	
Cobalt-60	0.482	0.486	A		-0.8	0.340 - 0.632	0.0189	A
Manganese-54	0.00500		A			False Positive Test	0.0144	
Plutonium-238	0.0236	0.0216	A		9.3	0.0151 - 0.0281	0.00245	A
Plutonium-239/240	0.0162	0.0141	A		14.9	0.0099 - 0.0183	0.00235	A
Strontium-90	0.440	0.502	A		-12.4	0.351 - 0.653	0.0612	A
Uranium-234	0.0576	0.064	A		-10.0	0.045 - 0.083	0.00322	A
Uranium-238	0.0577	0.067	A		-13.9	0.047 - 0.087	0.00320	A
Zinc-65	-0.00252		A			False Positive Test	0.0177	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(CESL01) Lawrence Livermore National Laboratory - EMRL
7000 East Avenue
Livermore, CA 94551

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	3.27E-01	0.340	A		-3.8	0.238 - 0.442	1.76E-02	A
Cesium-137	6.84E-01	0.678	A		0.9	0.475 - 0.881	3.63E-02	A
Cobalt-57	7.11E-01		N	(1)		False Positive Test	2.89E-02	
Cobalt-60	4.83E-01	0.486	A		-0.6	0.340 - 0.632	2.79E-02	A
Manganese-54	-2.53E-03		A			False Positive Test	1.97E-02	
Plutonium-238	2.21E-02	0.0216	A		2.3	0.0151 - 0.0281	9.41E-04	A
Plutonium-239/240	1.52E-02	0.0141	A		7.8	0.0099 - 0.0183	7.61E-04	A
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-2.59E-03		A			False Positive Test	8.40E-02	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
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- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(CMRC01) Carlsbad Environmental Monitoring and Research Center
1400 University Dr.
Carlsbad, NM 88220

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	4.60E-02	0.0437	A		5.3	0.0306 - 0.0568	2.45E-03	A
Cesium-134	NR	0.340				0.238 - 0.442		
Cesium-137	6.68E-01	0.678	A		-1.5	0.475 - 0.881	9.98E-03	N
Cobalt-57	NR					False Positive Test		
Cobalt-60	4.91E-01	0.486	A		1.0	0.340 - 0.632	9.33E-03	N
Manganese-54	NR					False Positive Test		
Plutonium-238	2.32E-02	0.0216	A		7.4	0.0151 - 0.0281	1.51E-03	A
Plutonium-239/240	1.66E-02	0.0141	A		17.7	0.0099 - 0.0183	1.21E-03	A
Strontium-90	4.22E-01	0.502	A		-15.9	0.351 - 0.653	5.72E-03	N
Uranium-234	6.53E-02	0.064	A		2.0	0.045 - 0.083	4.68E-03	A
Uranium-238	6.69E-02	0.067	A		-0.1	0.047 - 0.087	4.78E-03	A
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
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- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(COPS99) Health Canada Radiation Protection Bureau
775 Brookfield Road
Ottawa, Ontario K1A 1C1

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.4	0.340	A		17.6	0.238 - 0.442	0.03	A
Cesium-137	0.73	0.678	A		7.7	0.475 - 0.881	0.05	A
Cobalt-57	0.00001		A			False Positive Test	0.00001	
Cobalt-60	0.53	0.486	A		9.1	0.340 - 0.632	0.03	A
Manganese-54	0.000035		A			False Positive Test	0.000027	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.00013		A			False Positive Test	0.00011	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(DEHS01) Department of Environmental Health & Safety
North Carolina State Univ.
Raleigh, NC 27695-8007

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.36	0.340	A		5.9	0.238 - 0.442	0.02	A
Cesium-137	0.73	0.678	A		7.7	0.475 - 0.881	0.05	A
Cobalt-57	-0.04		A			False Positive Test	0.02	
Cobalt-60	0.424	0.486	A		-12.8	0.340 - 0.632	0.026	A
Manganese-54	0.001		A			False Positive Test	0.05	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.045		A			False Positive Test	0.24	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(DINL99) Departamento Ingeniería Energética
Escuela de Ingeniería de Bilbao
Bilbao, Vizcaya 48013

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.03737	0.0437	A		-14.5	0.0306 - 0.0568	0.002563	A
Cesium-134	0.3428	0.340	A		0.8	0.238 - 0.442	0.02411	A
Cesium-137	0.6437	0.678	A		-5.1	0.475 - 0.881	0.04375	A
Cobalt-57	0.09804		A			False Positive Test	0.09804	
Cobalt-60	0.5115	0.486	A		5.2	0.340 - 0.632	0.03456	A
Manganese-54	0.02157		A			False Positive Test	0.02157	
Plutonium-238	0.01876	0.0216	A		-13.1	0.0151 - 0.0281	0.001881	A
Plutonium-239/240	0.01432	0.0141	A		1.6	0.0099 - 0.0183	0.001567	A
Strontium-90	0.4732	0.502	A		-5.7	0.351 - 0.653	0.03052	A
Uranium-234	0.05976	0.064	A		-6.6	0.045 - 0.083	0.003978	A
Uranium-238	0.06233	0.067	A		-7.0	0.047 - 0.087	0.004092	A
Zinc-65	0.03226		A			False Positive Test	0.03226	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(ERCL01) Washington State Public Health Laboratories
1610 N.E. 150th Street
Shoreline, WA 98155-9701

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.0370	0.039	A		-5.1	0.027 - 0.051	0.0050	A
Uranium-238	5.20	5.36	A		-3.0	3.75 - 6.97	0.71	A
Uranium-Total	5.20	5.40	A		-3.7	3.78 - 7.02	0.71	A

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0388	0.0437	A		-11.2	0.0306 - 0.0568	0.0032	A
Cesium-134	0.286	0.340	A		-15.9	0.238 - 0.442	0.019	A
Cesium-137	0.666	0.678	A		-1.8	0.475 - 0.881	0.032	A
Cobalt-57	-0.041		A			False Positive Test	0.040	
Cobalt-60	0.496	0.486	A		2.1	0.340 - 0.632	0.034	A
Manganese-54	-0.0078		A			False Positive Test	0.0094	
Plutonium-238	0.0213	0.0216	A		-1.4	0.0151 - 0.0281	0.0017	A
Plutonium-239/240	0.0164	0.0141	A		16.3	0.0099 - 0.0183	0.0014	A
Strontium-90	0.488	0.502	A		-2.8	0.351 - 0.653	0.028	A
Uranium-234	0.0622	0.064	A		-2.8	0.045 - 0.083	0.0036	A
Uranium-238	0.0651	0.067	A		-2.8	0.047 - 0.087	0.0038	A
Zinc-65	-0.0059		A			False Positive Test	0.0089	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(ERHD99) National Monitoring Section, Radiation Protection Bureau, Health Canada
775 Brookfield Road AL6302D1
Ottawa, Ontario K1A 1C1

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.0408	0.039	A		4.6	0.027 - 0.051	0.00049	N
Uranium-238	5.580	5.36	A		4.1	3.75 - 6.97	0.06	N
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0461	0.0437	A		5.5	0.0306 - 0.0568	0.002	A
Cesium-134	0.35	0.340	A		2.9	0.238 - 0.442	0.018	A
Cesium-137	0.69	0.678	A		1.8	0.475 - 0.881	0.039	A
Cobalt-57	0.02		A			False Positive Test	0.04	
Cobalt-60	0.49	0.486	A		0.8	0.340 - 0.632	0.02	A
Manganese-54	0.03		A			False Positive Test	0.06	
Plutonium-238	0.0231	0.0216	A		6.9	0.0151 - 0.0281	0.001	A
Plutonium-239/240	0.0142	0.0141	A		0.7	0.0099 - 0.0183	0.001	A
Strontium-90	0.486	0.502	A		-3.2	0.351 - 0.653	0.03	A
Uranium-234	0.0650	0.064	A		1.6	0.045 - 0.083	0.002	A
Uranium-238	0.0690	0.067	A		3.0	0.047 - 0.087	0.002	A
Zinc-65	0.03		A			False Positive Test	0.06	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(FDHE01) Florida Dept of Health Environmental Laboratory
2100 All Childrens Way
Orlando, FL 32818-5271

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.031	0.0437	W		-29.1	0.0306 - 0.0568	0.046	N
Cesium-134	0.34	0.340	A		0.0	0.238 - 0.442	0.01	A
Cesium-137	0.651	0.678	A		-4.0	0.475 - 0.881	0.03	A
Cobalt-57	0.016		A			False Positive Test	0.016	
Cobalt-60	0.471	0.486	A		-3.1	0.340 - 0.632	0.022	A
Manganese-54	0.014		A			False Positive Test	0.06	
Plutonium-238	0.151	0.0216	N		599.1	0.0151 - 0.0281	0.06	N
Plutonium-239/240	0.047	0.0141	N		233.3	0.0099 - 0.0183	0.04	N
Strontium-90	0.6	0.502	A		19.5	0.351 - 0.653	0.07	A
Uranium-234	0.075	0.064	A		17.2	0.045 - 0.083	0.04	N
Uranium-238	0.077	0.067	A		14.9	0.047 - 0.087	0.04	N
Zinc-65	0.003		A			False Positive Test	0.164	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52

(FDOH01) Florida Dept. of Health, Mobile Environmental Radiological Lab

2100 All Childrens Way

Orlando, FL 32818-5271

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.05	0.0437	A		14.4	0.0306 - 0.0568	0.01	W
Cesium-134	0.354	0.340	A		4.1	0.238 - 0.442	0.01	A
Cesium-137	0.688	0.678	A		1.5	0.475 - 0.881	0.017	A
Cobalt-57	0.011		A			False Positive Test	0.011	
Cobalt-60	0.476	0.486	A		-2.1	0.340 - 0.632	0.013	A
Manganese-54	-0.009		A			False Positive Test	0.031	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	0.086	0.067	W		28.4	0.047 - 0.087	0.128	N
Zinc-65	0.033		A			False Positive Test	0.166	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(FNL01) Fermi National Accelerator Laboratory (FermiLab)
PO Box 500, MS325
Batavia, IL 60510

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.282	0.340	A		-17.1	0.238 - 0.442	0.027	A
Cesium-137	0.630	0.678	A		-7.1	0.475 - 0.881	0.054	A
Cobalt-57	0.017		A			False Positive Test	0.061	
Cobalt-60	0.467	0.486	A		-3.9	0.340 - 0.632	0.043	A
Manganese-54	0.001		A			False Positive Test	0.014	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.007		A			False Positive Test	0.019	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

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

Laboratory Results For MAPEP Series 52
(GENE01) GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.0361	0.039	A		-7.4	0.027 - 0.051	0.00309	A
Uranium-238	5.45	5.36	A		1.7	3.75 - 6.97	0.462	A
Uranium-Total	5.486	5.40	A		1.6	3.78 - 7.02	0.462	A

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.045	0.0437	A		3.0	0.0306 - 0.0568	0.00415	A
Cesium-134	0.408	0.340	A		20.0	0.238 - 0.442	0.0534	A
Cesium-137	0.803	0.678	A		18.4	0.475 - 0.881	0.0609	A
Cobalt-57	0.001		A			False Positive Test	0.182	
Cobalt-60	0.522	0.486	A		7.4	0.340 - 0.632	0.0604	A
Manganese-54	0.0108		A			False Positive Test	0.0226	
Plutonium-238	0.0272	0.0216	W		25.9	0.0151 - 0.0281	0.00176	A
Plutonium-239/240	0.0164	0.0141	A		16.3	0.0099 - 0.0183	0.00125	A
Strontium-90	0.455	0.502	A		-9.4	0.351 - 0.653	0.0643	A
Uranium-234	0.0641	0.064	A		0.2	0.045 - 0.083	0.00349	A
Uranium-238	0.0661	0.067	A		-1.3	0.047 - 0.087	0.00357	A
Zinc-65	0.0464		A			False Positive Test	0.0539	

Radiological Reference Date: February 1, 2025

Results Flags:

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

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

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

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

Laboratory Results For MAPEP Series 52
(GPCL01) Georgia Power Company Environmental Laboratory
2480 Maner Road
Atlanta, GA 30339

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.3212	0.340	A		-5.5	0.238 - 0.442	0.0626	W
Cesium-137	0.6557	0.678	A		-3.3	0.475 - 0.881	0.1106	W
Cobalt-57	0.6074		N	(1)		False Positive Test	0.0842	
Cobalt-60	0.4745	0.486	A		-2.4	0.340 - 0.632	0.0790	W
Manganese-54	-0.0109		A			False Positive Test	0.0982	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.0695		A			False Positive Test	0.3036	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

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



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

Laboratory Results For MAPEP Series 52
(HECR01) SC Department of Environmental Services
8231 Parklane Road
Columbia, SC 29223

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.1299	0.340	N		-61.8	0.238 - 0.442	0.2404	N
Cesium-137	0.5788	0.678	A		-14.6	0.475 - 0.881	0.2285	N
Cobalt-57	0.6718		N	(1)		False Positive Test	0.1764	
Cobalt-60	0.4290	0.486	A		-11.7	0.340 - 0.632	0.2245	N
Manganese-54	0.2765		A			False Positive Test	0.2837	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	1.430		A			False Positive Test	0.7975	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
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- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(HPAC99) UKHSA, RCE Glasgow
155 Hardgate Road
Glasgow, Scotland G51 4LS

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	.065	5.36	N		-98.8	3.75 - 6.97	.0065	A
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.0496	0.0437	A		13.5	0.0306 - 0.0568	.0028	A
Cesium-134	NR	0.340				0.238 - 0.442		
Cesium-137	NR	0.678	N	(28)		0.475 - 0.881		
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	NR	0.486	N	(28)		0.340 - 0.632		
Manganese-54	NR		N	(11)		False Positive Test		
Plutonium-238	.0234	0.0216	A		8.3	0.0151 - 0.0281	.0013	A
Plutonium-239/240	.0175	0.0141	W		24.1	0.0099 - 0.0183	.0011	A
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(HPAL01) Los Alamos National Laboratory
Scott Engeman, z277361 MS G761
Los Alamos, NM 87545-1663

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.09	0.0437	N		106.0	0.0306 - 0.0568	0.03	N
Cesium-134	0.34	0.340	A		0.0	0.238 - 0.442	0.04	A
Cesium-137	0.74	0.678	A		9.1	0.475 - 0.881	0.08	A
Cobalt-57	0.68		N	(1)		False Positive Test	0.04	
Cobalt-60	0.59	0.486	W		21.4	0.340 - 0.632	0.07	A
Manganese-54	NR					False Positive Test		
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(IEMA01) Illinois Emergency Management Agency Radiochemistry Laboratory
1301 Knotts St.
Springfield, IL 62703

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0406	0.0437	A		-7.1	0.0306 - 0.0568	0.0022	A
Cesium-134	0.268	0.340	W		-21.2	0.238 - 0.442	0.036	A
Cesium-137	0.714	0.678	A		5.3	0.475 - 0.881	0.057	A
Cobalt-57	0.779		N	(1)		False Positive Test	0.029	
Cobalt-60	0.416	0.486	A		-14.4	0.340 - 0.632	0.041	A
Manganese-54	-0.044		A			False Positive Test	0.039	
Plutonium-238	0.02218	0.0216	A		2.7	0.0151 - 0.0281	0.00153	A
Plutonium-239/240	0.01747	0.0141	W		23.9	0.0099 - 0.0183	0.00131	A
Strontium-90	0.455	0.502	A		-9.4	0.351 - 0.653	0.023	A
Uranium-234	0.07074	0.064	A		10.5	0.045 - 0.083	0.00305	A
Uranium-238	0.06744	0.067	A		0.7	0.047 - 0.087	0.00294	A
Zinc-65	0.035		A			False Positive Test	0.079	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(JAE99) Research Laboratories and Information Directorate
Jordan Atomic Energy Commission
Amman, Jordan 70 (11934)

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.32	0.340	A		-5.9	0.238 - 0.442	0.08	W
Cesium-137	0.69	0.678	A		1.8	0.475 - 0.881	0.07	A
Cobalt-57	NR					False Positive Test		
Cobalt-60	0.43	0.486	A		-11.5	0.340 - 0.632	0.08	W
Manganese-54	NR					False Positive Test		
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	0.083	0.064	W		29.7	0.045 - 0.083	0.0057	A
Uranium-238	0.079	0.067	A		17.9	0.047 - 0.087	0.0055	A
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52

(JLNN01) Jefferson Laboratory

111 Hadron Drive

Newport News, VA 23606

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0422	0.0437	A		-3.4	0.0306 - 0.0568	0.019	N
Cesium-134	0.242	0.340	W		-28.8	0.238 - 0.442	0.0199	A
Cesium-137	0.4925	0.678	W		-27.4	0.475 - 0.881	0.0295	A
Cobalt-57	0.565		N	(1)		False Positive Test	0.0191	
Cobalt-60	0.3825	0.486	W		-21.3	0.340 - 0.632	0.0307	A
Manganese-54	0.006412		A			False Positive Test	0.0521	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.0126		A			False Positive Test	0.115	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(JNRC99) Energy and Mineral Regulatory Commission
Radiological laboratories directorate
Amman, Amman 11821

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	.3	0.340	A		-11.8	0.238 - 0.442	0.01	A
Cesium-137	.6	0.678	A		-11.5	0.475 - 0.881	0.04	A
Cobalt-57	.6		N	(1)		False Positive Test	.06	
Cobalt-60	.4	0.486	A		-17.7	0.340 - 0.632	0.02	A
Manganese-54	NR					False Positive Test		
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(LAWR01) LAWRENCE BERKELEY NATIONAL LABORATORY
1 CYCLOTRON RD.
BERKELEY, CA 94720

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.284	0.340	A		-16.5	0.238 - 0.442	0.0415	A
Cesium-137	0.687	0.678	A		1.3	0.475 - 0.881	0.0516	A
Cobalt-57	0.733		N	(1)		False Positive Test	0.0398	
Cobalt-60	0.422	0.486	A		-13.2	0.340 - 0.632	0.0468	A
Manganese-54	0.0033		A			False Positive Test	0.0304	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.0608		A			False Positive Test	0.0701	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(LOCK03) Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory
INL/Battelle Energy Alliance, LLC
Idaho Falls, ID 83415-7111

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.29	0.340	A		-14.7	0.238 - 0.442	0.02	A
Cesium-137	0.66	0.678	A		-2.7	0.475 - 0.881	0.05	A
Cobalt-57	0.06		A			False Positive Test	0.03	
Cobalt-60	0.53	0.486	A		9.1	0.340 - 0.632	0.03	A
Manganese-54	0.04		N	(1)		False Positive Test	0.01	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.13		N	(1)		False Positive Test	0.03	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(MART01) Fluor-BWXT Portsmouth LLC, Analytical Laboratory
COC, Bldg. X-705, Rm 106
Piketon, OH 45661

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.04342	0.0437	A		-0.6	0.0306 - 0.0568	0.00466	A
Cesium-134	NR	0.340				0.238 - 0.442		
Cesium-137	NR	0.678				0.475 - 0.881		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	0.486				0.340 - 0.632		
Manganese-54	NR					False Positive Test		
Plutonium-238	0.02565	0.0216	A		18.8	0.0151 - 0.0281	0.003015	A
Plutonium-239/240	0.01962	0.0141	N		39.1	0.0099 - 0.0183	0.002677	A
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	0.06425	0.064	A		0.4	0.045 - 0.083	0.005054	A
Uranium-238	0.06266	0.067	A		-6.5	0.047 - 0.087	0.004957	A
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(MART03) Radioactive Material Analysis Laboratory
ORNL
Oak Ridge, TN 37830

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.035	0.0437	A		-19.9	0.0306 - 0.0568	0.003	A
Cesium-134	0.329	0.340	A		-3.2	0.238 - 0.442	0.016	A
Cesium-137	0.670	0.678	A		-1.2	0.475 - 0.881	0.030	A
Cobalt-57	0.029		A			False Positive Test	0.029	
Cobalt-60	0.455	0.486	A		-6.4	0.340 - 0.632	0.022	A
Manganese-54	0.072		A			False Positive Test	0.072	
Plutonium-238	0.022	0.0216	A		1.9	0.0151 - 0.0281	0.002	A
Plutonium-239/240	0.014	0.0141	A		-0.7	0.0099 - 0.0183	0.002	A
Strontium-90	0.459	0.502	A		-8.6	0.351 - 0.653	0.028	A
Uranium-234	0.066	0.064	A		3.1	0.045 - 0.083	0.005	A
Uranium-238	0.074	0.067	A		10.4	0.047 - 0.087	0.005	A
Zinc-65	0.26		A			False Positive Test	0.26	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(MDPH01) MDPH-Division of Radiation Control
MERL-Room 0066
Jamaica Plain, MA 02130-3597

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.29	0.340	A		-14.7	0.238 - 0.442	0.02	A
Cesium-137	0.61	0.678	A		-10.0	0.475 - 0.881	0.05	A
Cobalt-57	NR					False Positive Test		
Cobalt-60	0.51	0.486	A		4.9	0.340 - 0.632	0.05	A
Manganese-54	NR					False Positive Test		
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(MNDH01) Minnesota Department of Health, Public Health Lab. Division
601 Robert St. N.
St. Paul, MN 55155

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.241	0.340	W		-29.1	0.238 - 0.442	0.0102	A
Cesium-137	0.643	0.678	A		-5.2	0.475 - 0.881	0.0213	A
Cobalt-57	0.584		N	(1)		False Positive Test	0.0131	
Cobalt-60	0.354	0.486	W		-27.2	0.340 - 0.632	0.0135	A
Manganese-54	0.010		A			False Positive Test	0.0132	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.054		A			False Positive Test	0.0331	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(NARL01) National Analytical Radiation Environmental Laboratory
540 S. Morris Ave.
Montgomery, AL 36115-2601

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0373	0.0437	A		-14.6	0.0306 - 0.0568	0.00484	A
Cesium-134	0.381	0.340	A		12.1	0.238 - 0.442	0.0282	A
Cesium-137	0.694	0.678	A		2.4	0.475 - 0.881	0.0439	A
Cobalt-57	0.663		N	(1)		False Positive Test	0.0392	
Cobalt-60	0.429	0.486	A		-11.7	0.340 - 0.632	0.0277	A
Manganese-54	-0.00388		A			False Positive Test	0.0127	
Plutonium-238	0.0219	0.0216	A		1.4	0.0151 - 0.0281	0.0019	A
Plutonium-239/240	0.0140	0.0141	A		-0.7	0.0099 - 0.0183	0.00141	A
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	0.0625	0.064	A		-2.3	0.045 - 0.083	0.00614	A
Uranium-238	0.058	0.067	A		-13.4	0.047 - 0.087	0.00587	A
Zinc-65	-0.113		A			False Positive Test	0.0447	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(NESI01) BWXT-Radioisotope & Analytical Chemistry Laboratory
Lynchburg Technology Center
Lynchburg, VA 24504-5447

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.046	0.0437	A		5.3	0.0306 - 0.0568	0.005	A
Cesium-134	0.319	0.340	A		-6.2	0.238 - 0.442	0.081	W
Cesium-137	0.682	0.678	A		0.6	0.475 - 0.881	0.074	A
Cobalt-57	0.873		N	(1)		False Positive Test	0.063	
Cobalt-60	0.502	0.486	A		3.3	0.340 - 0.632	0.100	W
Manganese-54	0.046		A			False Positive Test	0.09	
Plutonium-238	0.016	0.0216	W		-25.9	0.0151 - 0.0281	0.003	W
Plutonium-239/240	0.014	0.0141	A		-0.7	0.0099 - 0.0183	0.002	A
Strontium-90	0.518	0.502	A		3.2	0.351 - 0.653	0.042	A
Uranium-234	0.630	0.064	N		884.4	0.045 - 0.083	0.05	A
Uranium-238	0.579	0.067	N		764.2	0.047 - 0.087	0.048	A
Zinc-65	0.396		A			False Positive Test	0.241	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(NJDH01) New Jersey Dept. of Health, ECLS
3 Schwarzkopf Drive
Ewing, NJ 08628

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.34	0.340	A		0.0	0.238 - 0.442	0.04	A
Cesium-137	0.71	0.678	A		4.7	0.475 - 0.881	0.07	A
Cobalt-57	0.59		N	(1)		False Positive Test	0.07	
Cobalt-60	0.38	0.486	W		-21.8	0.340 - 0.632	0.05	A
Manganese-54	-0.007		A			False Positive Test	0.04	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.47		N	(29)		False Positive Test	0.09	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(NRLL99) Environmental Radioactivity - National Centre for Radiation Science
PO Box 29181
Christchurch, Christchurch 8540

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0400	0.0437	A		-8.5	0.0306 - 0.0568	0.0034	A
Cesium-134	0.334	0.340	A		-1.8	0.238 - 0.442	0.018	A
Cesium-137	0.646	0.678	A		-4.7	0.475 - 0.881	0.028	A
Cobalt-57	0.0097		A			False Positive Test	0.0048	
Cobalt-60	0.456	0.486	A		-6.2	0.340 - 0.632	0.024	A
Manganese-54	0.022		A			False Positive Test	0.011	
Plutonium-238	0.0228	0.0216	A		5.6	0.0151 - 0.0281	0.0013	A
Plutonium-239/240	0.0147	0.0141	A		4.3	0.0099 - 0.0183	0.0010	A
Strontium-90	0.415	0.502	A		-17.3	0.351 - 0.653	0.022	A
Uranium-234	0.0651	0.064	A		1.7	0.045 - 0.083	0.0026	A
Uranium-238	0.0659	0.067	A		-1.6	0.047 - 0.087	0.0027	A
Zinc-65	0.070		A			False Positive Test	0.034	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(ODHL01) Ohio Department of Health Laboratory
8995 E Main Street
Reynoldsburg, OH 43068

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.314	0.340	A		-7.6	0.238 - 0.442	0.0143	A
Cesium-137	0.620	0.678	A		-8.6	0.475 - 0.881	0.0411	A
Cobalt-57	0.0301		A			False Positive Test	0.0293	
Cobalt-60	0.436	0.486	A		-10.3	0.340 - 0.632	0.0188	A
Manganese-54	-0.000566		A			False Positive Test	0.00779	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.0105		A			False Positive Test	0.00903	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(RAVR99) Radiactividad Ambiental y Vigilancia Radiologica
CIEMAT (Ed 70 P2 D11)
Madrid, Madrid 28040

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0484	0.0437	A		10.8	0.0306 - 0.0568	0.0058	A
Cesium-134	0.334	0.340	A		-1.8	0.238 - 0.442	0.016	A
Cesium-137	0.620	0.678	A		-8.6	0.475 - 0.881	0.018	A
Cobalt-57	0.0001		A			False Positive Test	0.1	
Cobalt-60	0.451	0.486	A		-7.2	0.340 - 0.632	0.016	A
Manganese-54	0.0001		A			False Positive Test	0.1	
Plutonium-238	0.0220	0.0216	A		1.9	0.0151 - 0.0281	0.0024	A
Plutonium-239/240	0.0165	0.0141	A		17.0	0.0099 - 0.0183	0.0021	A
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	0.0620	0.064	A		-3.1	0.045 - 0.083	0.0037	A
Uranium-238	0.0577	0.067	A		-13.9	0.047 - 0.087	0.0035	A
Zinc-65	0.0001		A			False Positive Test	1	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP Series 52

(RPSC01) Radiation Protection Service

O. Ministry of Labour, Immigration, Training & Skills Development

Mississauga, Ontario L4V 1W8

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.376	0.340	A		10.6	0.238 - 0.442	0.0515	A
Cesium-137	0.611	0.678	A		-9.9	0.475 - 0.881	0.0940	W
Cobalt-57	0.571		N	(1)		False Positive Test	0.0794	
Cobalt-60	0.433	0.486	A		-10.9	0.340 - 0.632	0.0667	W
Manganese-54	0.0376		A			False Positive Test	0.124	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.313		A			False Positive Test	0.376	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

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



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

Laboratory Results For MAPEP Series 52
(SEML01) SRS Environmental Monitoring Laboratory
Bldg 735-B
Aiken, SC 29808

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0381	0.0437	A		-12.8	0.0306 - 0.0568	0.0021	A
Cesium-134	0.313	0.340	A		-7.9	0.238 - 0.442	0.055	W
Cesium-137	0.61	0.678	A		-10.0	0.475 - 0.881	0.10	W
Cobalt-57	0.159		A			False Positive Test	0.088	
Cobalt-60	0.458	0.486	A		-5.8	0.340 - 0.632	0.069	W
Manganese-54	0.10		A			False Positive Test	0.11	
Plutonium-238	0.0205	0.0216	A		-5.1	0.0151 - 0.0281	0.0015	A
Plutonium-239/240	0.0146	0.0141	A		3.5	0.0099 - 0.0183	0.0012	A
Strontium-90	0.376	0.502	W		-25.1	0.351 - 0.653	0.023	A
Uranium-234	0.0636	0.064	A		-0.6	0.045 - 0.083	0.0030	A
Uranium-238	0.0668	0.067	A		-0.3	0.047 - 0.087	0.0031	A
Zinc-65	0.16		A			False Positive Test	0.15	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(SOUT01) Southwest Research Institute
6220 Culebra Rd.
San Antonio, TX 78238-5166

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.0362	0.039	A		-7.2	0.027 - 0.051	0.00647	W
Uranium-238	5.26	5.36	A		-1.9	3.75 - 6.97	0.842	W
Uranium-Total	5.30	5.40	A		-1.9	3.78 - 7.02	0.848	W

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0385	0.0437	A		-11.9	0.0306 - 0.0568	0.00637	W
Cesium-134	0.260	0.340	W		-23.5	0.238 - 0.442	0.0247	A
Cesium-137	0.719	0.678	A		6.0	0.475 - 0.881	0.0481	A
Cobalt-57	0.767		N	(1)		False Positive Test	0.0291	
Cobalt-60	0.478	0.486	A		-1.6	0.340 - 0.632	0.0537	A
Manganese-54	-0.0385		A			False Positive Test	0.0567	
Plutonium-238	0.00989	0.0216	N		-54.2	0.0151 - 0.0281	0.00318	N
Plutonium-239/240	0.00989	0.0141	W		-29.9	0.0099 - 0.0183	0.00318	N
Strontium-90	0.298	0.502	N		-40.6	0.351 - 0.653	0.0444	A
Uranium-234	0.0596	0.064	A		-6.9	0.045 - 0.083	0.00826	A
Uranium-238	0.0696	0.067	A		3.9	0.047 - 0.087	0.00893	A
Zinc-65	0.0656		A			False Positive Test	0.0715	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52

(SRPD01) Sandia National Laboratories, Radiation Protection Sample Diagnostics

PO Box 5800, MS1103

Albuquerque, NM 87185-1103

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	3.23E-01	0.340	A		-5.0	0.238 - 0.442	2.95E-02	A
Cesium-137	6.28E-01	0.678	A		-7.4	0.475 - 0.881	4.80E-02	A
Cobalt-57	-1.52E-02		A			False Positive Test	1.11E-01	
Cobalt-60	4.41E-01	0.486	A		-9.3	0.340 - 0.632	3.66E-02	A
Manganese-54	3.24E-02		A			False Positive Test	2.13E-02	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-1.63E-01		N	(29)		False Positive Test	3.94E-02	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(TDHL01) Texas Department of State Health Services Laboratory
1100 W 49th Street
Austin, TX 78756

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437	N	(28)		0.0306 - 0.0568		
Cesium-134	0.250	0.340	W		-26.5	0.238 - 0.442	0.016	A
Cesium-137	0.602	0.678	A		-11.2	0.475 - 0.881	0.031	A
Cobalt-57	0.565		N	(1)		False Positive Test	0.023	
Cobalt-60	0.448	0.486	A		-7.8	0.340 - 0.632	0.021	A
Manganese-54	0.023		A			False Positive Test	0.023	
Plutonium-238	NR	0.0216	N	(28)		0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141	N	(28)		0.0099 - 0.0183		
Strontium-90	NR	0.502	N	(28)		0.351 - 0.653		
Uranium-234	NR	0.064	N	(28)		0.045 - 0.083		
Uranium-238	NR	0.067	N	(28)		0.047 - 0.087		
Zinc-65	-0.236		N	(29)		False Positive Test	0.052	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(TELE02) Microbac Laboratories Inc. - Northbrook
700 Landwehr Road
Northbrook, IL 60062-

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.34	0.340	A		0.0	0.238 - 0.442	0.07	W
Cesium-137	0.76	0.678	A		12.1	0.475 - 0.881	0.12	W
Cobalt-57	0.74		N	(1)		False Positive Test	0.10	
Cobalt-60	0.48	0.486	A		-1.2	0.340 - 0.632	0.10	W
Manganese-54	0.002		A			False Positive Test	0.041	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.16		A			False Positive Test	0.16	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(TMAO01) EBERLINE Analytical Corporation
601 A SCARBORO RD
OAK RIDGE, TN 37830-

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.045	0.0437	A		3.0	0.0306 - 0.0568	0.037	N
Cesium-134	0.254	0.340	W		-25.3	0.238 - 0.442	0.086	N
Cesium-137	0.602	0.678	A		-11.2	0.475 - 0.881	0.156	W
Cobalt-57	0.611		N	(1)		False Positive Test	0.125	
Cobalt-60	0.405	0.486	A		-16.7	0.340 - 0.632	0.120	W
Manganese-54	-0.011		A			False Positive Test	0.097	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	0.509	0.502	A		1.4	0.351 - 0.653	0.042	A
Uranium-234	0.078	0.064	W		21.9	0.045 - 0.083	0.024	N
Uranium-238	0.063	0.067	A		-6.0	0.047 - 0.087	0.021	N
Zinc-65	0.288		A			False Positive Test	0.603	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP Series 52
(WIPH01) WI, DPH, Radiation Protection Section
1 West Wilson Street
Madison, WI 53703

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0403	0.0437	A		-7.8	0.0306 - 0.0568	0.0582	N
Cesium-134	0.3329	0.340	A		-2.1	0.238 - 0.442	0.0180	A
Cesium-137	0.5803	0.678	A		-14.4	0.475 - 0.881	0.0420	A
Cobalt-57	0.5538		N	(1)		False Positive Test	0.0622	
Cobalt-60	0.4217	0.486	A		-13.2	0.340 - 0.632	0.0216	A
Manganese-54	0.0363		A			False Positive Test	0.0168	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	0.0280		A			False Positive Test	0.0723	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
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- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52

(WIPP01) WIPP Laboratories

1400 University Drive

Carlsbad, NM 88220

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	4.49E-02	0.0437	A		2.7	0.0306 - 0.0568	3.25E-03	A
Cesium-134	3.20E-01	0.340	A		-5.9	0.238 - 0.442	1.33E-02	A
Cesium-137	6.63E-01	0.678	A		-2.2	0.475 - 0.881	2.11E-02	A
Cobalt-57	6.36E-01		N	(1)		False Positive Test	1.85E-02	
Cobalt-60	4.90E-01	0.486	A		0.8	0.340 - 0.632	2.19E-02	A
Manganese-54	1.37E-03		A			False Positive Test	8.52E-03	
Plutonium-238	2.30E-02	0.0216	A		6.5	0.0151 - 0.0281	2.06E-03	A
Plutonium-239/240	1.62E-02	0.0141	A		14.9	0.0099 - 0.0183	1.55E-03	A
Strontium-90	4.56E-01	0.502	A		-9.2	0.351 - 0.653	2.01E-02	A
Uranium-234	6.69E-02	0.064	A		4.5	0.045 - 0.083	7.70E-03	A
Uranium-238	6.83E-02	0.067	A		1.9	0.047 - 0.087	7.86E-03	A
Zinc-65	8.39E-03		A			False Positive Test	1.41E-02	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(WMGS01) Westinghouse (Waltz Mill Gamma Spectroscopy Lab)
P.O. Box 158
Madison, Pennsylvania 15663

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.220	0.340	N		-35.3	0.238 - 0.442	0.00972	A
Cesium-137	0.555	0.678	A		-18.1	0.475 - 0.881	0.0247	A
Cobalt-57	0.573		N	(1)		False Positive Test	0.0178	
Cobalt-60	0.484	0.486	A		-0.4	0.340 - 0.632	0.0180	A
Manganese-54	.00607		A			False Positive Test	.0325	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.200		A			False Positive Test	0.0908	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(WSHL01) Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive
Madison, WI 53718

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0518	0.0437	A		18.5	0.0306 - 0.0568	0.00634	A
Cesium-134	0.296	0.340	A		-12.9	0.238 - 0.442	0.012	A
Cesium-137	0.783	0.678	A		15.5	0.475 - 0.881	0.031	A
Cobalt-57	0.645		N	(1)		False Positive Test	0.022	
Cobalt-60	0.484	0.486	A		-0.4	0.340 - 0.632	0.033	A
Manganese-54	0.00568		A			False Positive Test	0.0109	
Plutonium-238	0.02521	0.0216	A		16.7	0.0151 - 0.0281	0.00436	W
Plutonium-239/240	0.02487	0.0141	N		76.4	0.0099 - 0.0183	0.00376	W
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	0.06909	0.064	A		8.0	0.045 - 0.083	0.00636	A
Uranium-238	0.06921	0.067	A		3.3	0.047 - 0.087	0.00636	A
Zinc-65	0.274		N	(1)		False Positive Test	0.0678	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(WSTP99) Cavendish Nuclear Limited
Greson Court
Cumbria, UK CA24 3HZ

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.0396	0.039	A		1.5	0.027 - 0.051	0.0015	A
Uranium-238	5.64	5.36	A		5.2	3.75 - 6.97	0.19	A
Uranium-Total	6.08	5.40	A		12.6	3.78 - 7.02	0.19	A

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.344	0.340	A		1.2	0.238 - 0.442	0.033	A
Cesium-137	0.663	0.678	A		-2.2	0.475 - 0.881	0.058	A
Cobalt-57	0.001		A			False Positive Test	0.034	
Cobalt-60	0.432	0.486	A		-11.1	0.340 - 0.632	0.026	A
Manganese-54	-0.010		A			False Positive Test	0.014	
Plutonium-238	0.0199	0.0216	A		-7.9	0.0151 - 0.0281	0.0023	A
Plutonium-239/240	0.0142	0.0141	A		0.7	0.0099 - 0.0183	0.0019	A
Strontium-90	0.494	0.502	A		-1.6	0.351 - 0.653	0.032	A
Uranium-234	0.070	0.064	A		9.4	0.045 - 0.083	0.011	W
Uranium-238	0.0701	0.067	A		4.6	0.047 - 0.087	0.0024	A
Zinc-65	0.101		N	(1)		False Positive Test	0.031	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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



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

Laboratory Results For MAPEP Series 52
(WVDP01) WVDP Environmental Laboratory
10282 Rock Springs Road
West Valley, NY 14171

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.039				0.027 - 0.051		
Uranium-238	NR	5.36				3.75 - 6.97		
Uranium-Total	NR	5.40				3.78 - 7.02		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	0.323	0.340	A		-5.0	0.238 - 0.442	0.0353	A
Cesium-137	0.596	0.678	A		-12.1	0.475 - 0.881	0.0339	A
Cobalt-57	-0.0113		A			False Positive Test	0.0423	
Cobalt-60	0.414	0.486	A		-14.8	0.340 - 0.632	0.0217	A
Manganese-54	-0.00178		A			False Positive Test	0.0123	
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	-0.0351		A			False Positive Test	0.0223	

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

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

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP Series 52
(YPGA01) US Army Yuma Proving Ground / Material Analysis Lab
301 C. Street
Yuma, AZ 85365

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.036	0.039	A		-7.7	0.027 - 0.051	0.002	A
Uranium-238	4.91	5.36	A		-8.4	3.75 - 6.97	0.1	A
Uranium-Total	4.95	5.40	A		-8.3	3.78 - 7.02	0.11	A

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.0437				0.0306 - 0.0568		
Cesium-134	NR	0.340				0.238 - 0.442		
Cesium-137	NR	0.678				0.475 - 0.881		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	0.486				0.340 - 0.632		
Manganese-54	NR					False Positive Test		
Plutonium-238	NR	0.0216				0.0151 - 0.0281		
Plutonium-239/240	NR	0.0141				0.0099 - 0.0183		
Strontium-90	NR	0.502				0.351 - 0.653		
Uranium-234	NR	0.064				0.045 - 0.083		
Uranium-238	NR	0.067				0.047 - 0.087		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 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:

NOT ACCEPTABLE.....RP < 2%

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

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

NOT ACCEPTABLE.....RP > 30%

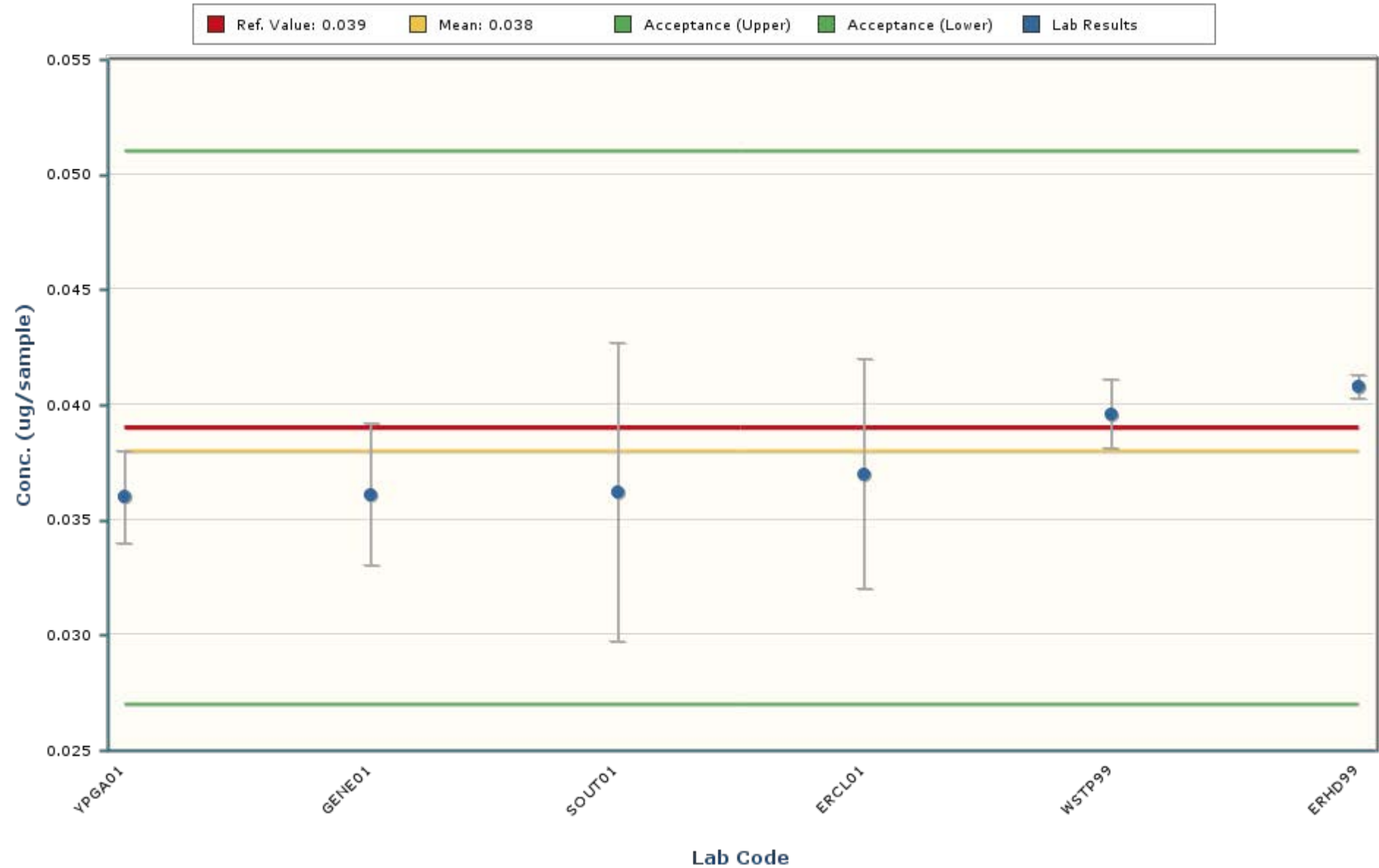
Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

The RdF52 sample contains 2.17 +/- 0.05 Bq/Sample of Eu-152

Notes:

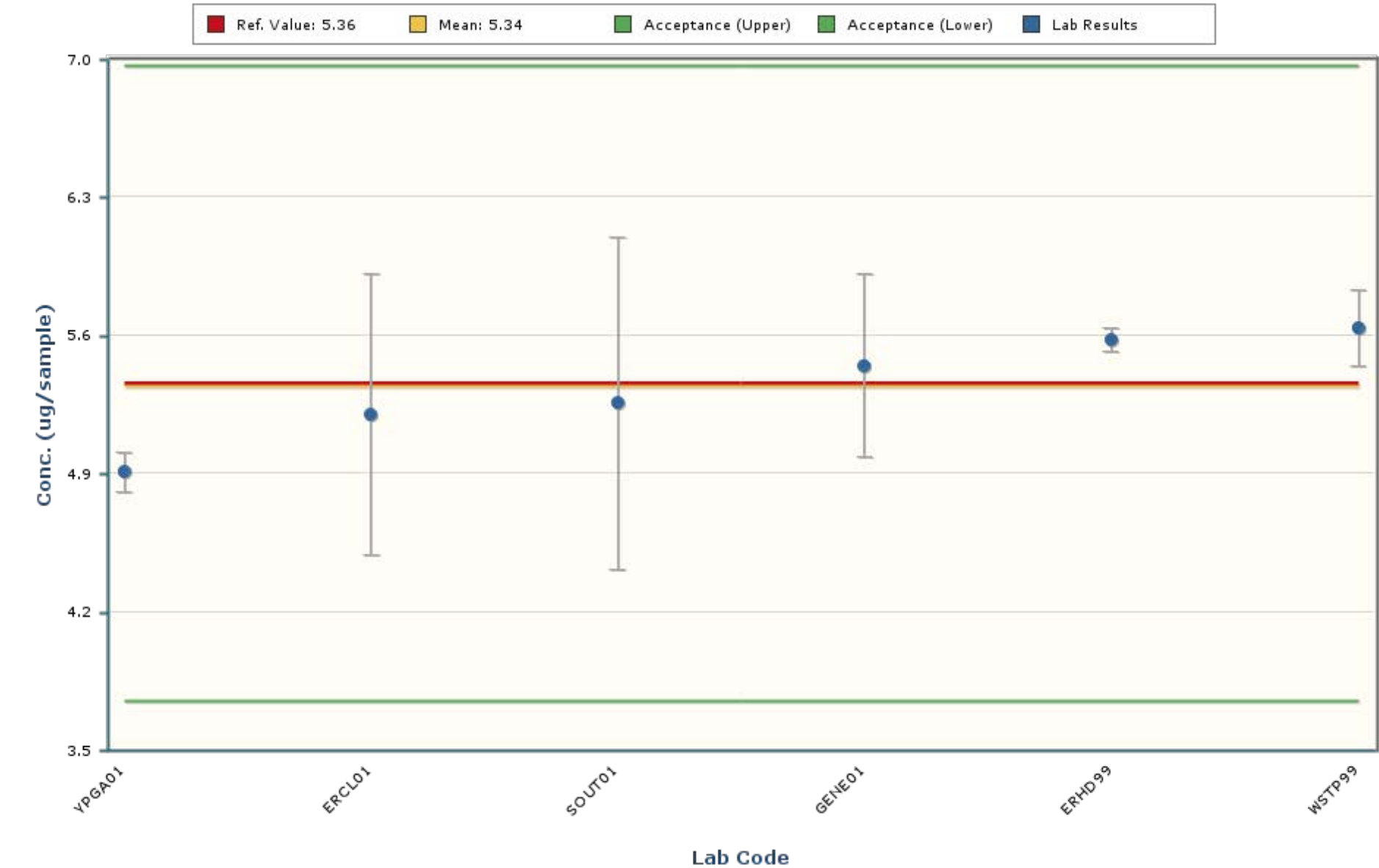
- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations

Uranium-235
MAPEP-25-RdF52



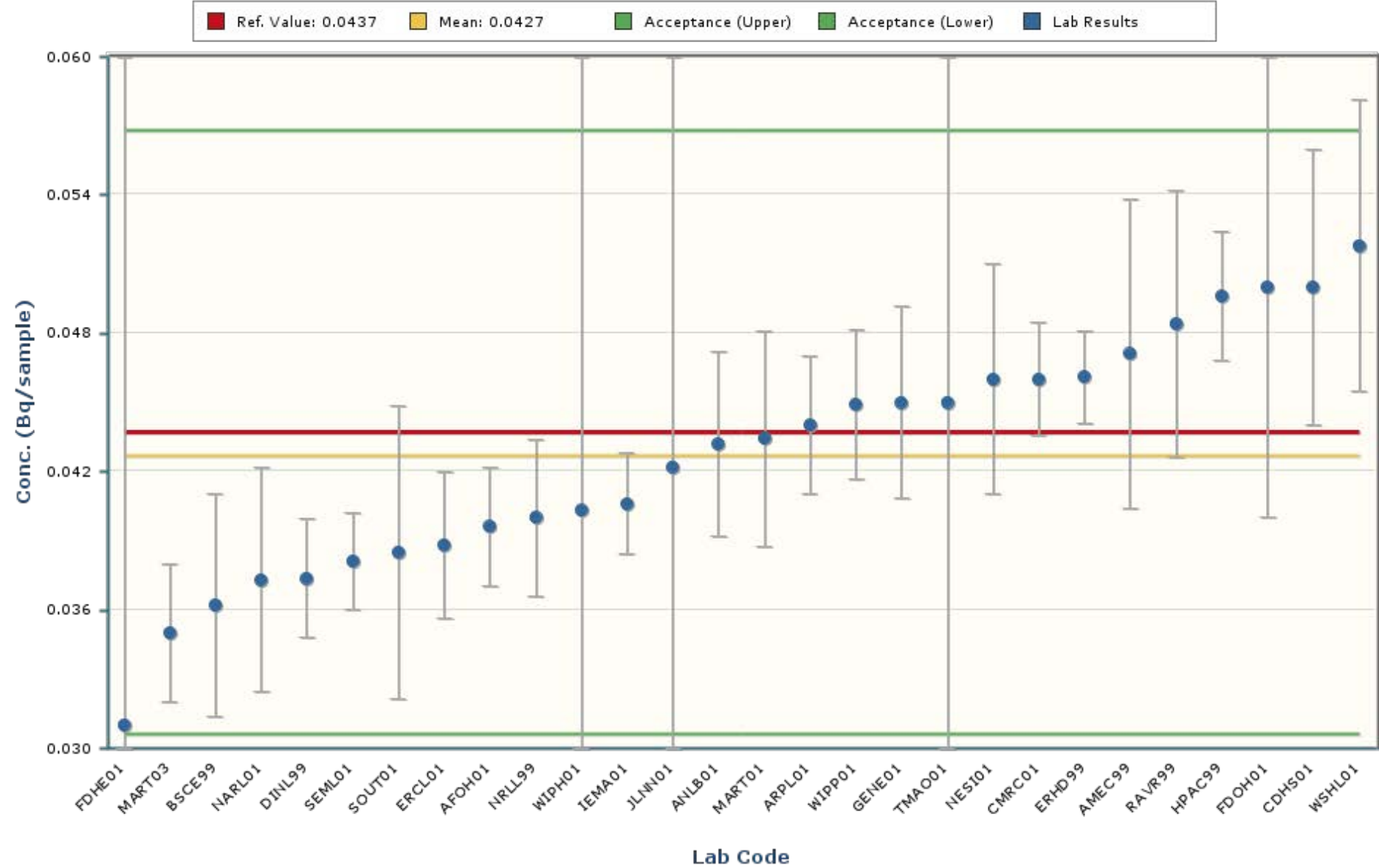
Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.027 and 0.048 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Uranium-238
MAPEP-25-RdF52



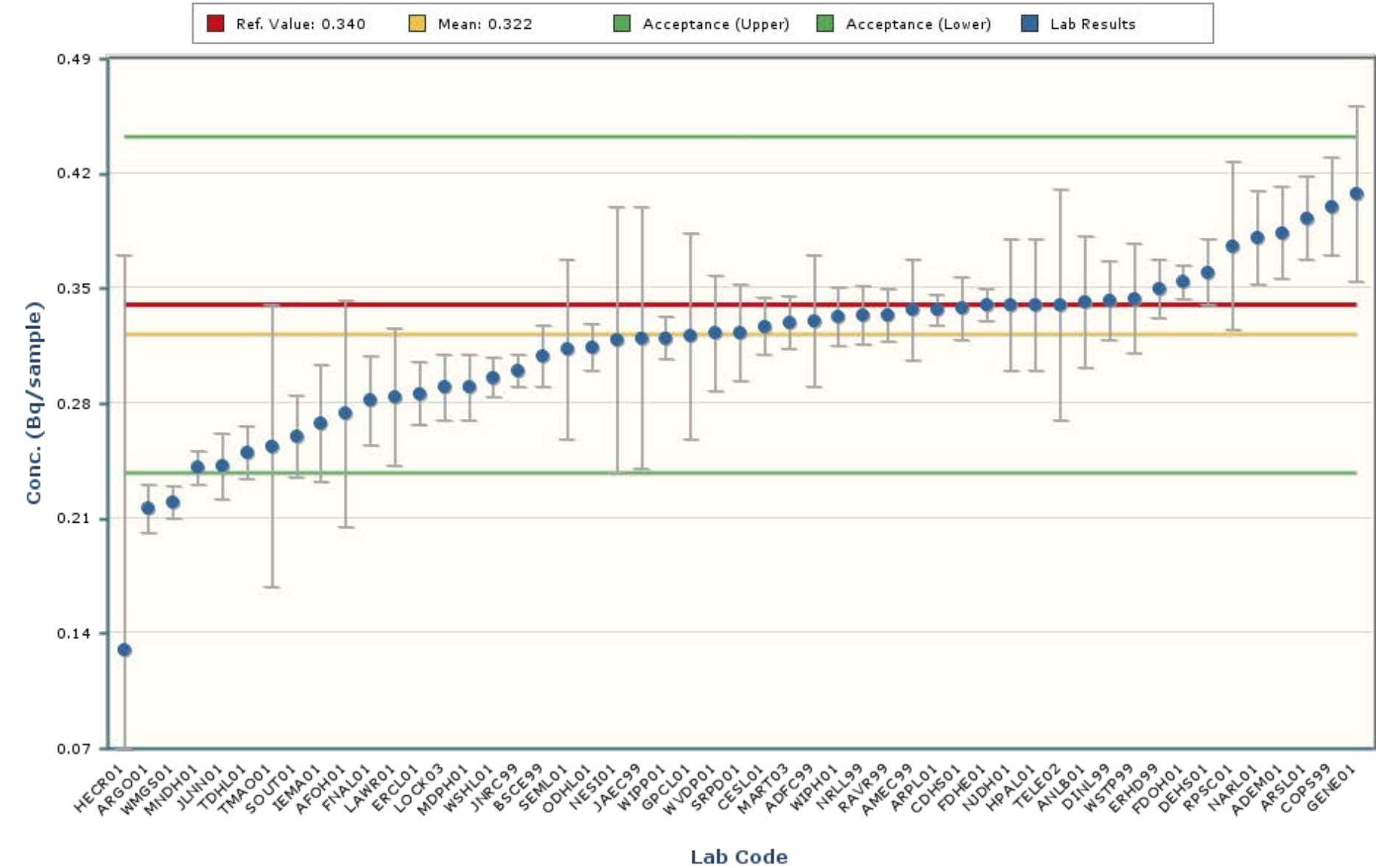
Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 3.98 and 6.70 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Americium-241
MAPEP-25-RdF52



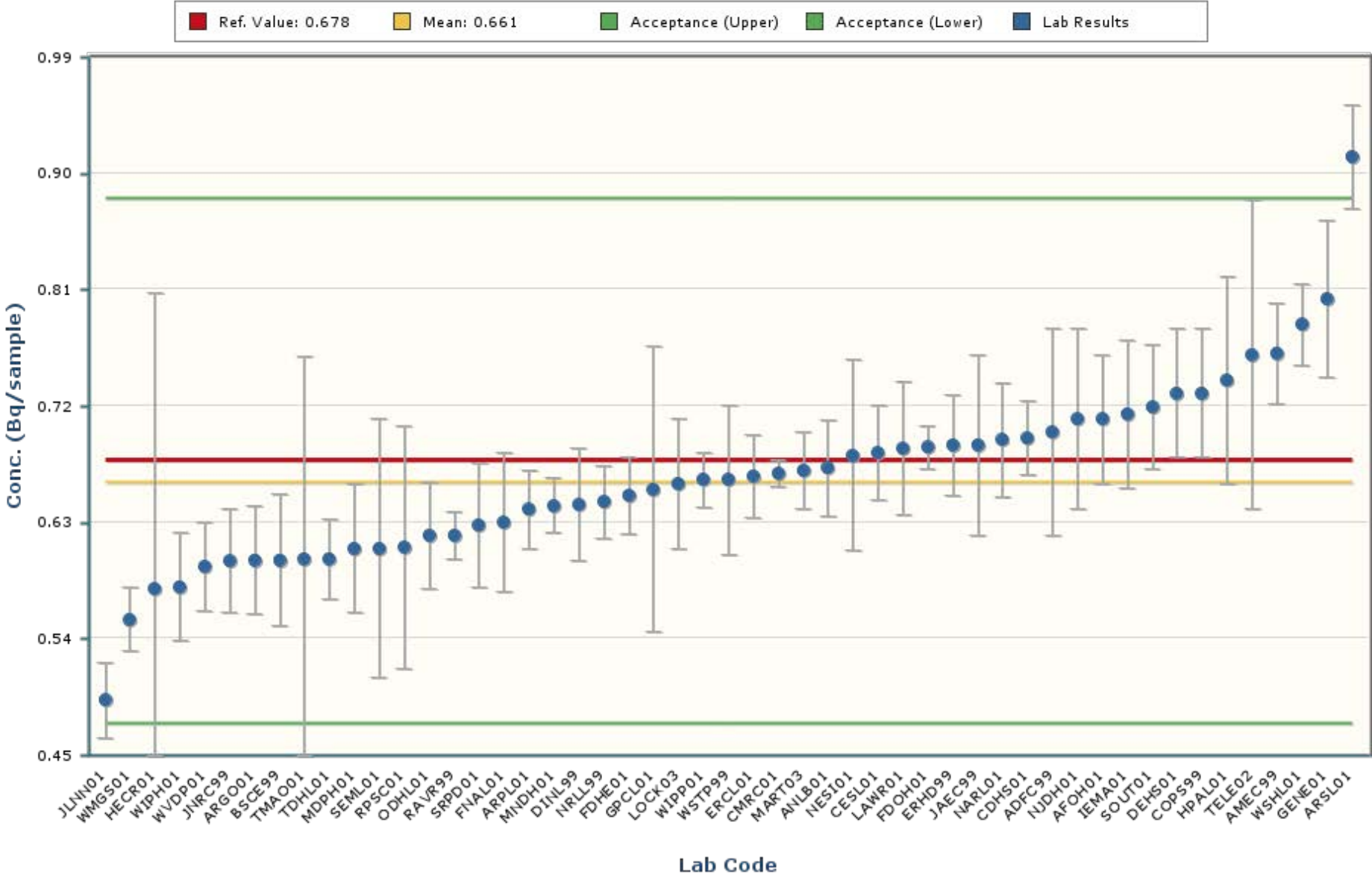
Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.0169 and 0.0685 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Cesium-134
MAPEP-25-RdF52



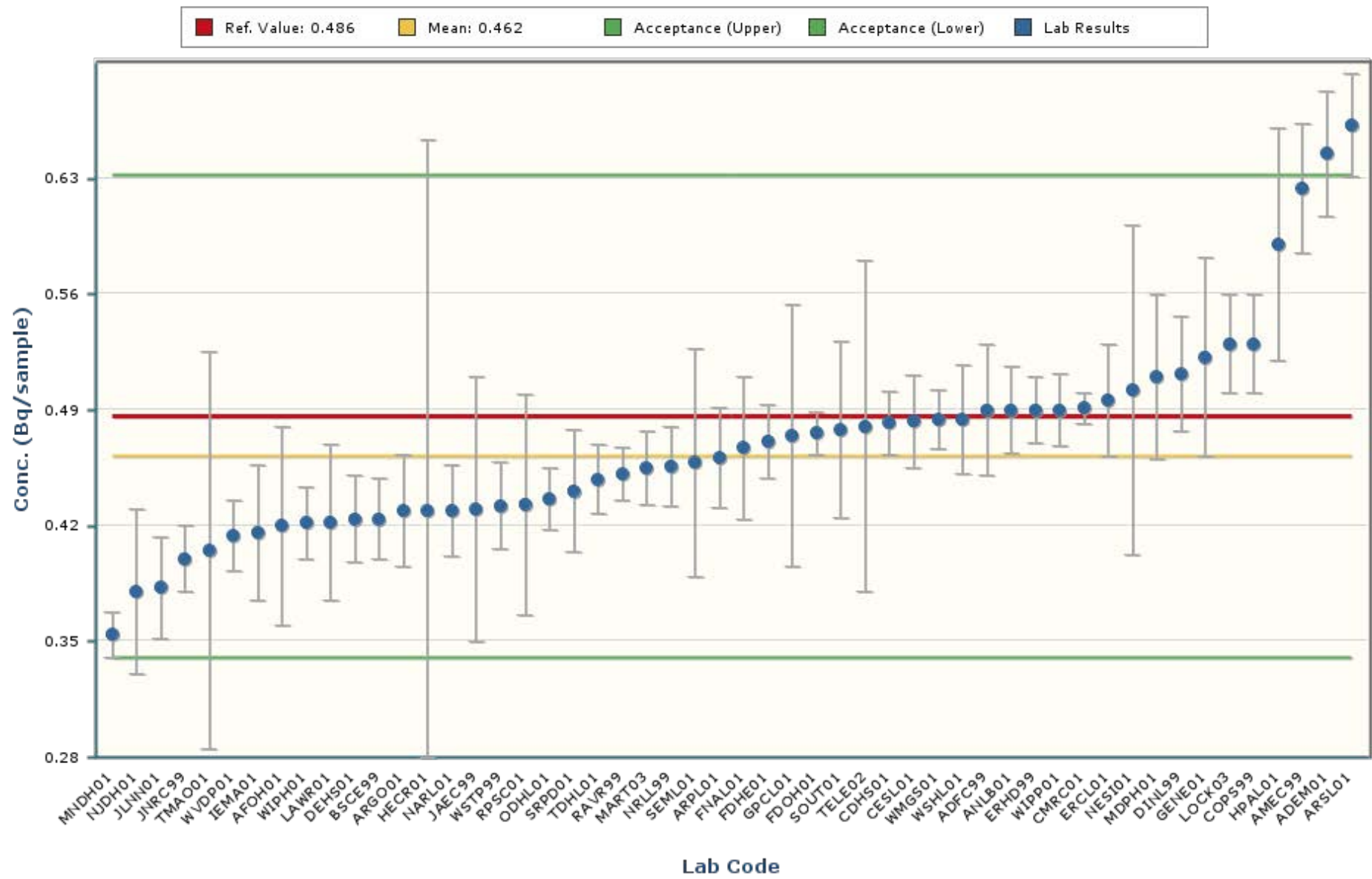
Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.122 and 0.523 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Cesium-137
MAPEP-25-RdF52



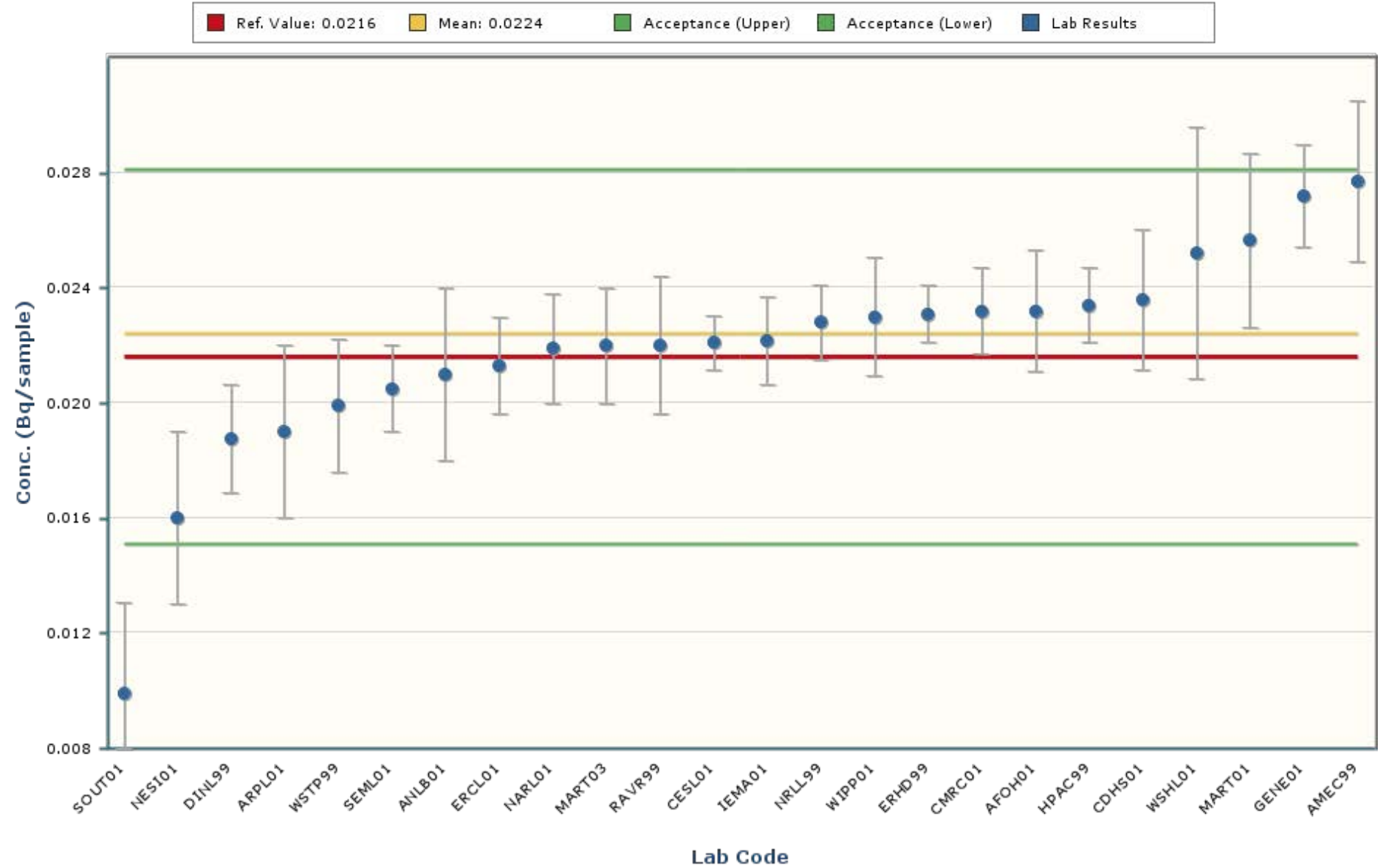
Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.359 and 0.963 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Cobalt-60
MAPEP-25-RdF52



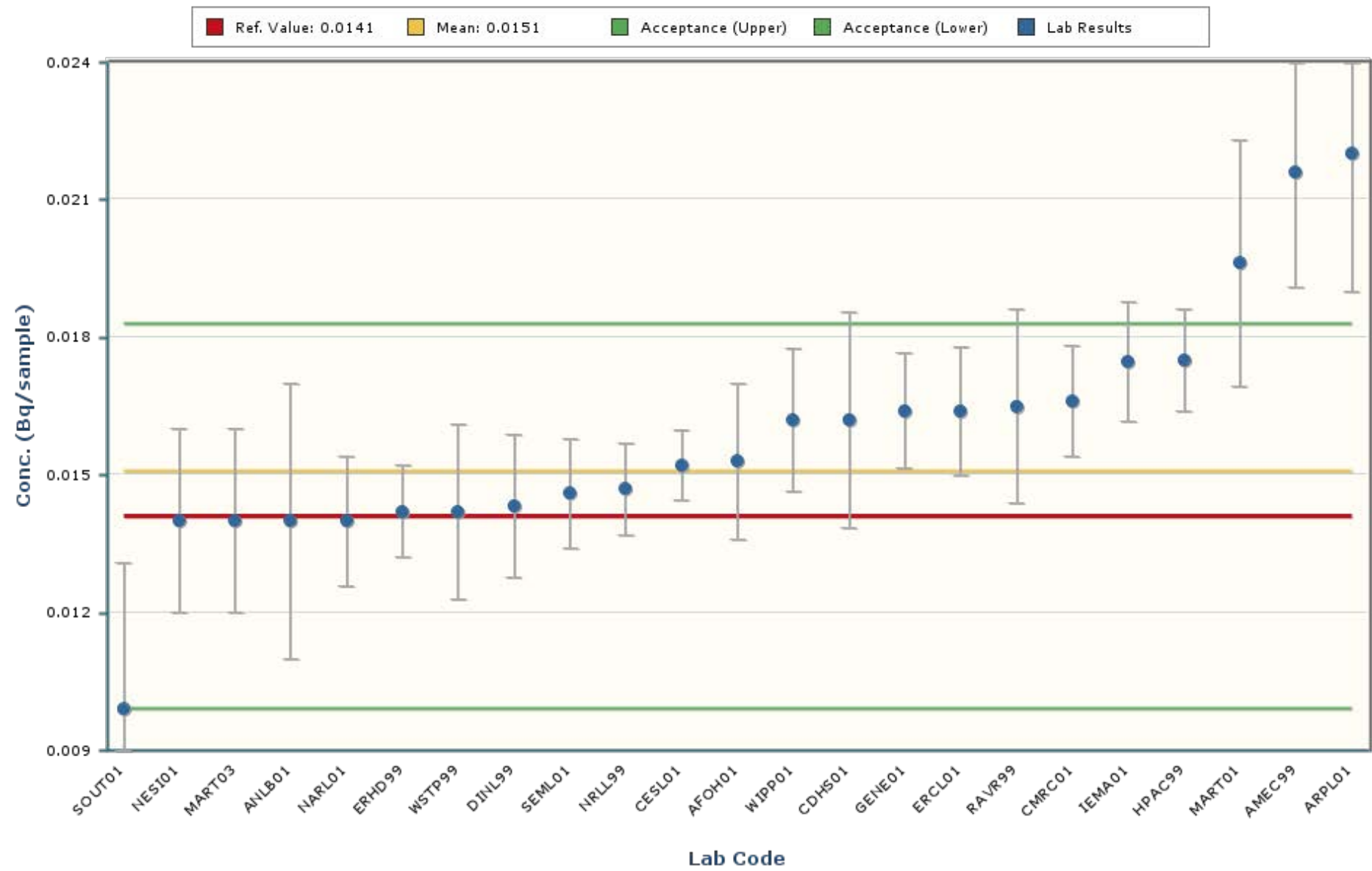
Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.213 and 0.711 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Plutonium-238
MAPEP-25-RdF52



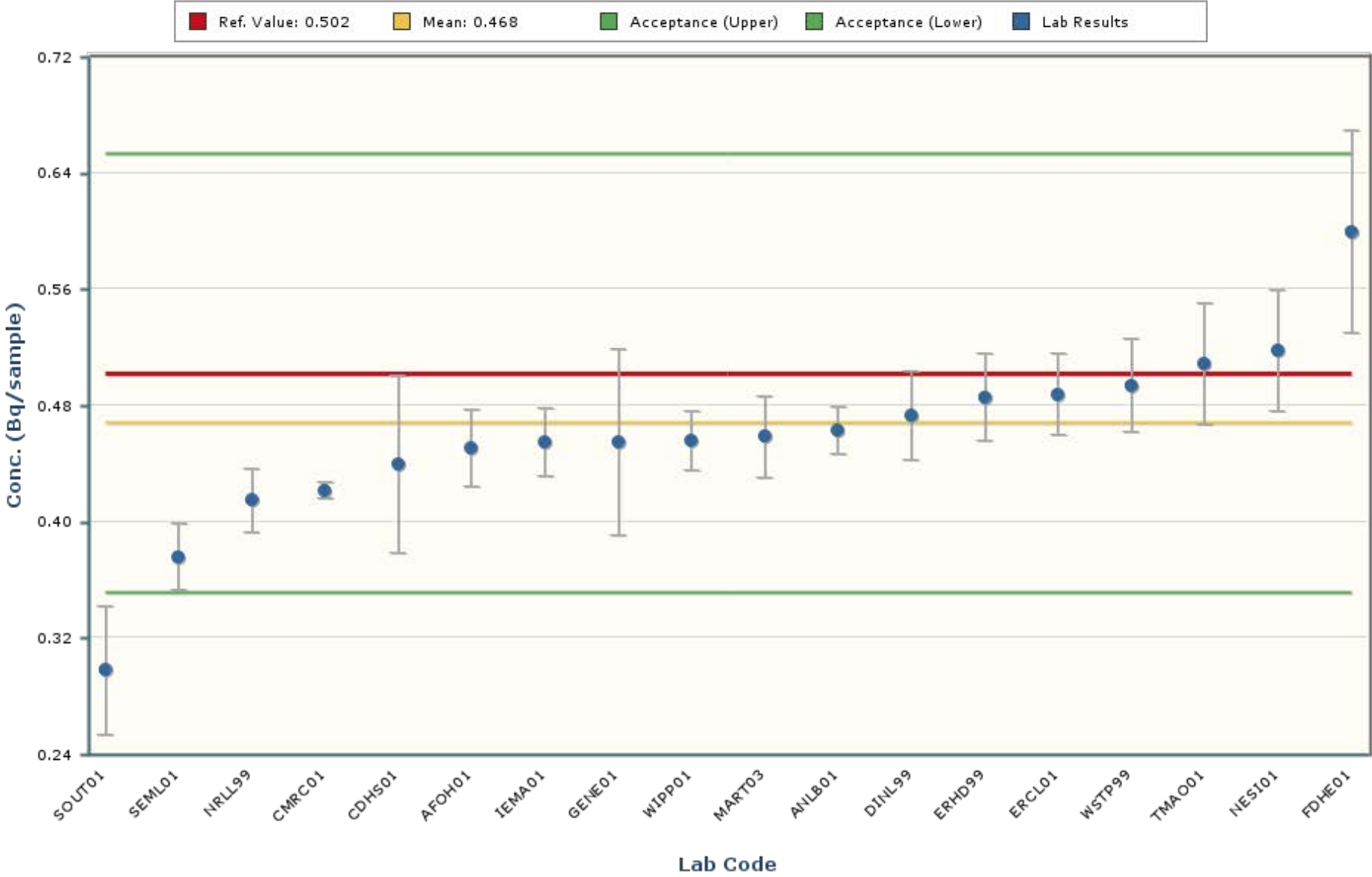
Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.0092 and 0.0356 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Plutonium-239/240
MAPEP-25-RdF52



Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.0065 and 0.0237 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

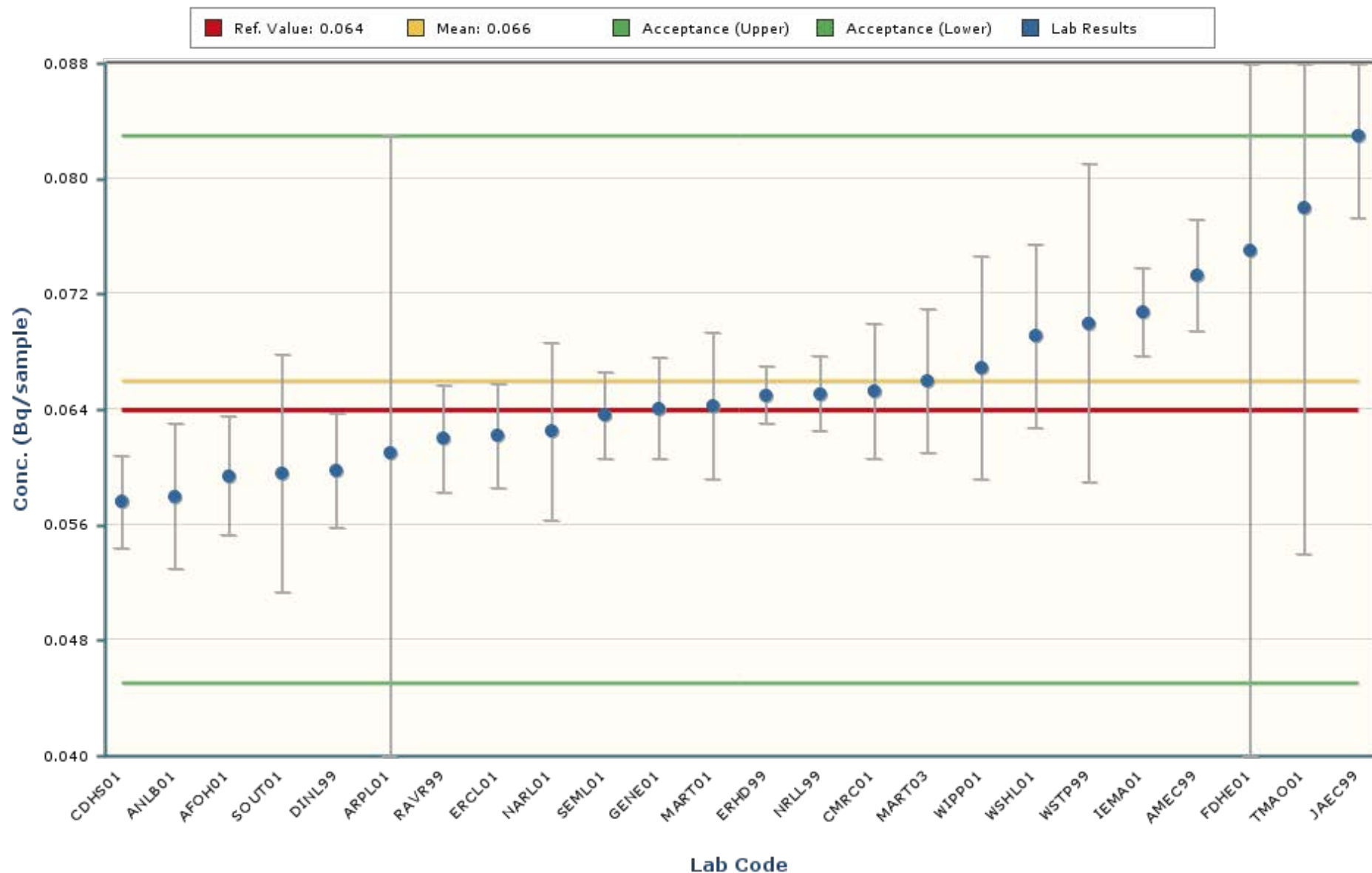
Strontium-90
MAPEP-25-RdF52



Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.224 and 0.712 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at $\pm$ one standard deviation.

Uranium-234

MAPEP-25-RdF52



Notes:

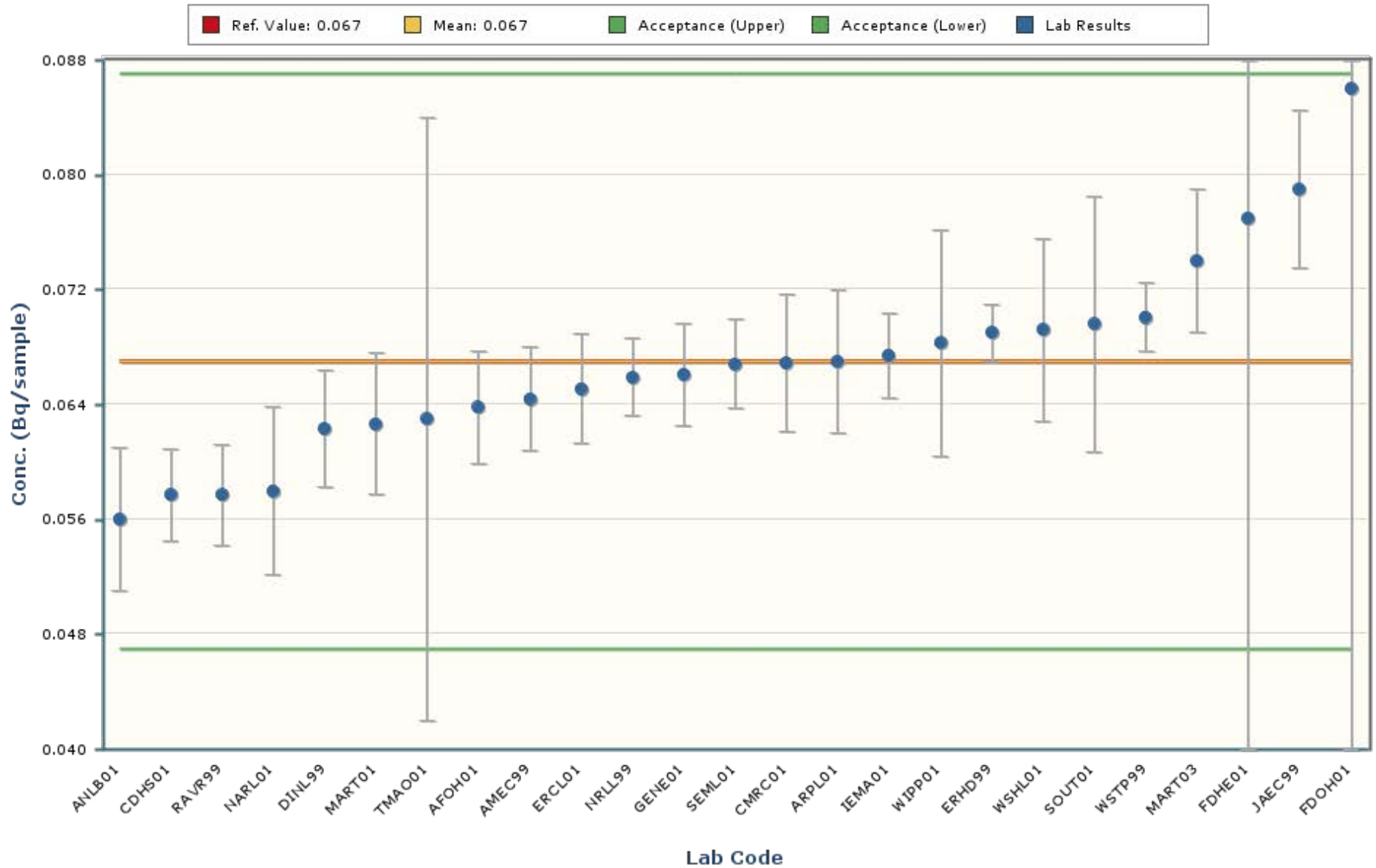
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.034 and 0.098 (± 5 Standard Deviations).

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

Uranium-238

MAPEP-25-RdF52



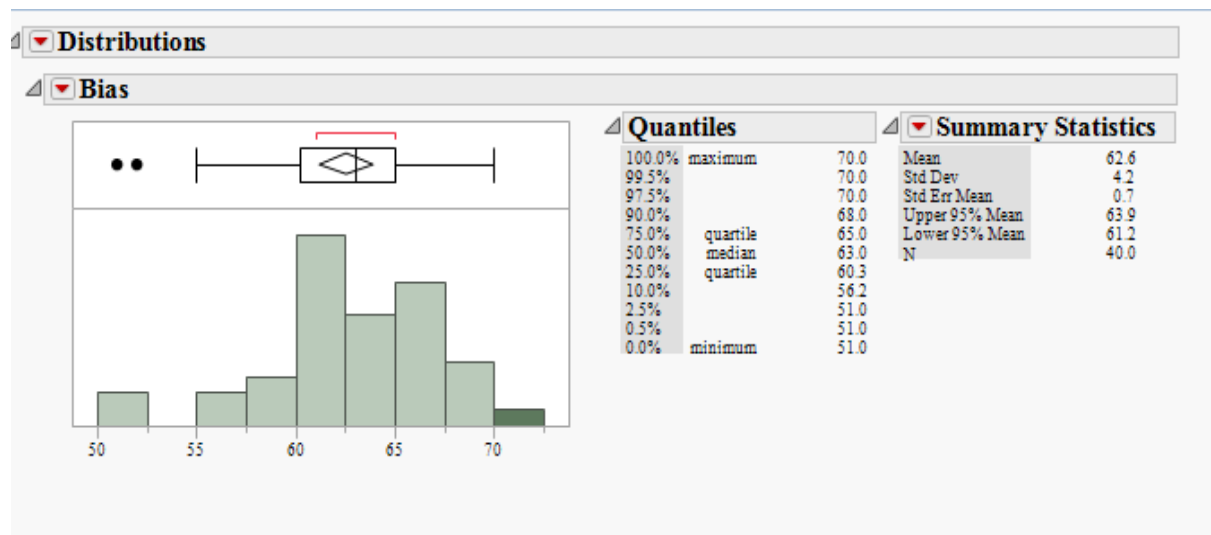
Notes:

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

The chart shows only data points with values between 0.033 and 0.101 (± 5 Standard Deviations).

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

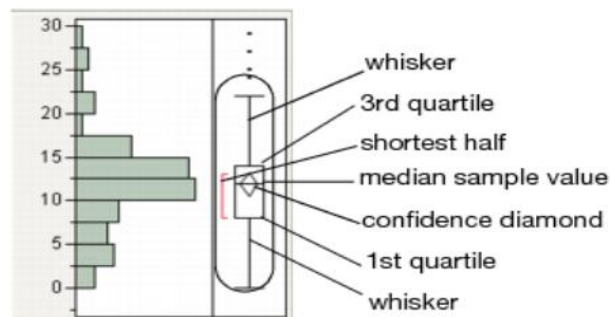


Outlier Box Plot

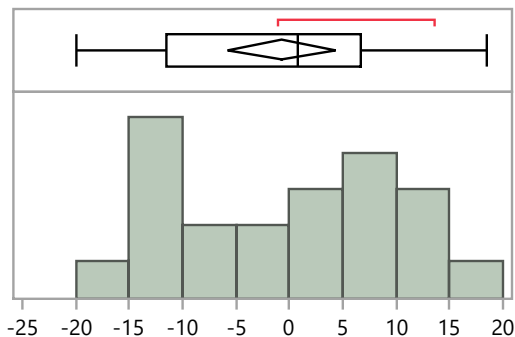
The BLACK small vertical line inside the small rectangle at the top of the data distribution graph is the median of the population of the bias shown for that analyte in the matrix. The confidence diamond contains the mean and the upper and lower 95% of the mean. If you drew a line through the middle 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)



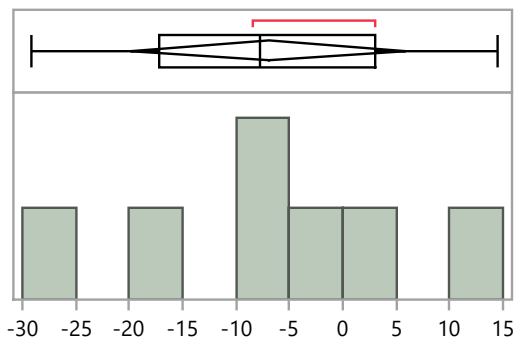
If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

RdF52 Distribution by Detection Method**Distributions Analyte_Detection=Americium-241 Alpha Spectrometry****Bias****Quantiles**

100.0%	maximum	18.5
99.5%		18.5
97.5%		18.5
90.0%		14.2
75.0%	quartile	6.7
50.0%	median	0.7
25.0%	quartile	-11.6
10.0%		-14.6
2.5%		-19.9
0.5%		-19.9
0.0%	minimum	-19.9

Summary Statistics

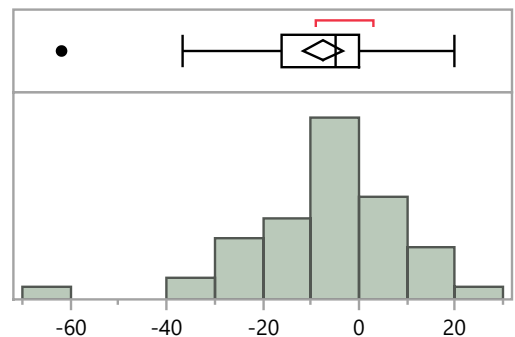
Mean	-0.7
Std Dev	10.9
Std Err Mean	2.4
Upper 95% Mean	4.2
Lower 95% Mean	-5.7
N	21.0

Distributions Analyte_Detection=Americium-241 Gamma Spectrometry**Bias****Quantiles**

100.0%	maximum	14.4
99.5%		14.4
97.5%		14.4
90.0%		14.4
75.0%	quartile	3.0
50.0%	median	-7.8
25.0%	quartile	-17.2
10.0%		-29.1
2.5%		-29.1
0.5%		-29.1
0.0%	minimum	-29.1

Summary Statistics

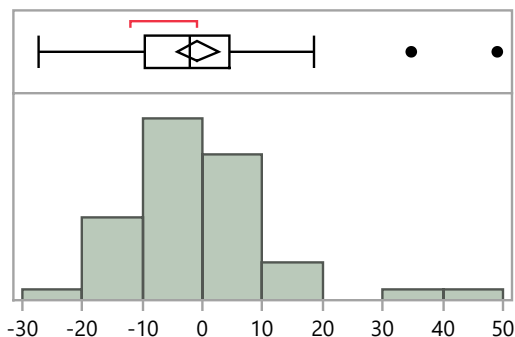
Mean	-6.9
Std Dev	13.9
Std Err Mean	5.3
Upper 95% Mean	6.0
Lower 95% Mean	-19.8
N	7.0

Distributions Analyte_Detection=Cesium-134 Gamma Spectrometry**Bias****Quantiles**

100.0%	maximum	20.0
99.5%		20.0
97.5%		19.3
90.0%		11.8
75.0%	quartile	0.0
50.0%	median	-5.0
25.0%	quartile	-15.9
10.0%		-28.3
2.5%		-54.2
0.5%		-61.8
0.0%	minimum	-61.8

Summary Statistics

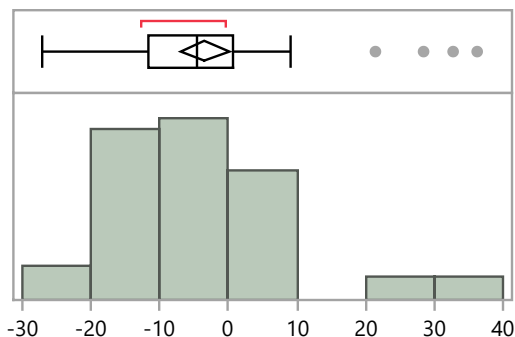
Mean	-7.5
Std Dev	15.1
Std Err Mean	2.1
Upper 95% Mean	-3.3
Lower 95% Mean	-11.7
N	51.0

RdF52 Distribution by Detection Method**Distributions Analyte_Detection=Cesium-137 Gamma Spectrometry****Bias****Quantiles**

100.0%	maximum	49.0
99.5%		49.0
97.5%		44.4
90.0%		12.2
75.0%	quartile	4.3
50.0%	median	-2.0
25.0%	quartile	-9.6
10.0%		-11.9
2.5%		-24.4
0.5%		-27.4
0.0%	minimum	-27.4

Summary Statistics

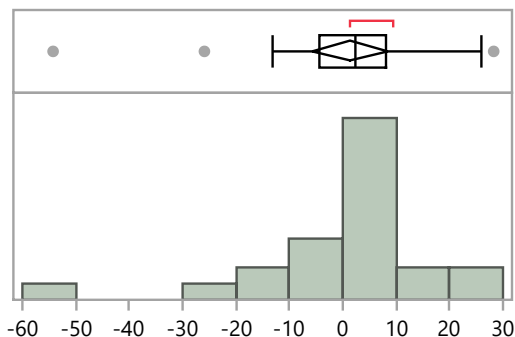
Mean	-0.8
Std Dev	12.4
Std Err Mean	1.7
Upper 95% Mean	2.6
Lower 95% Mean	-4.3
N	52.0

Distributions Analyte_Detection=Cobalt-60 Gamma Spectrometry**Bias****Quantiles**

100.0%	maximum	36.2
99.5%		36.2
97.5%		35.1
90.0%		9.1
75.0%	quartile	0.8
50.0%	median	-4.5
25.0%	quartile	-11.7
10.0%		-16.1
2.5%		-25.4
0.5%		-27.2
0.0%	minimum	-27.2

Summary Statistics

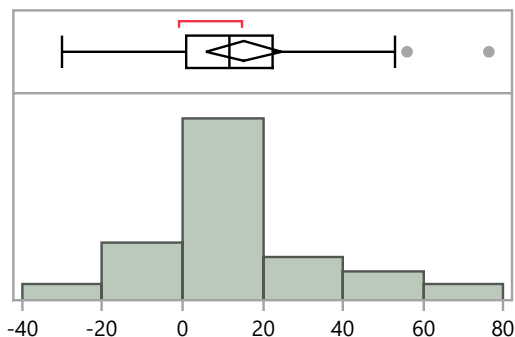
Mean	-3.4
Std Dev	12.6
Std Err Mean	1.8
Upper 95% Mean	0.1
Lower 95% Mean	-7.0
N	52.0

Distributions Analyte_Detection=Plutonium-238 Alpha Spectrometry**Bias****Quantiles**

100.0%	maximum	28.2
99.5%		28.2
97.5%		28.2
90.0%		22.4
75.0%	quartile	8.1
50.0%	median	2.5
25.0%	quartile	-4.5
10.0%		-19.5
2.5%		-54.2
0.5%		-54.2
0.0%	minimum	-54.2

Summary Statistics

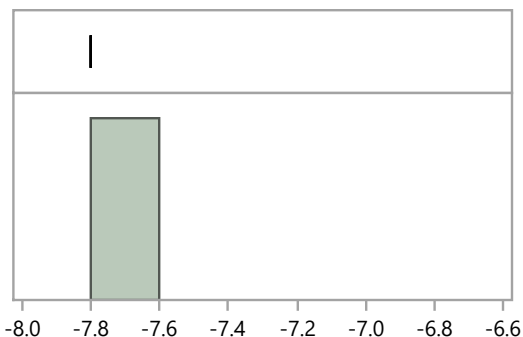
Mean	1.2
Std Dev	16.8
Std Err Mean	3.4
Upper 95% Mean	8.3
Lower 95% Mean	-5.9
N	24.0

RdF52 Distribution by Detection Method**Distributions Analyte_Detection=Plutonium-239/240 Alpha Spectrometry****Bias****Quantiles**

100.0%	maximum	76.4
99.5%		76.4
97.5%		76.4
90.0%		54.6
75.0%	quartile	22.4
50.0%	median	11.7
25.0%	quartile	0.7
10.0%		-0.7
2.5%		-29.9
0.5%		-29.9
0.0%	minimum	-29.9

Summary Statistics

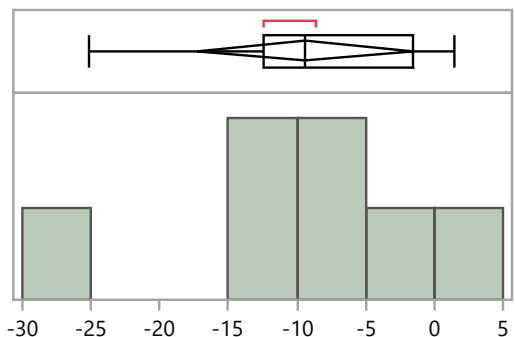
Mean	15.2
Std Dev	22.5
Std Err Mean	4.6
Upper 95% Mean	24.7
Lower 95% Mean	5.7
N	24.0

Distributions Analyte_Detection=Strontium-90 Alpha Spectrometry**Bias****Quantiles**

100.0%	maximum	-7.8
99.5%		-7.8
97.5%		-7.8
90.0%		-7.8
75.0%	quartile	-7.8
50.0%	median	-7.8
25.0%	quartile	-7.8
10.0%		-7.8
2.5%		-7.8
0.5%		-7.8
0.0%	minimum	-7.8

Summary Statistics

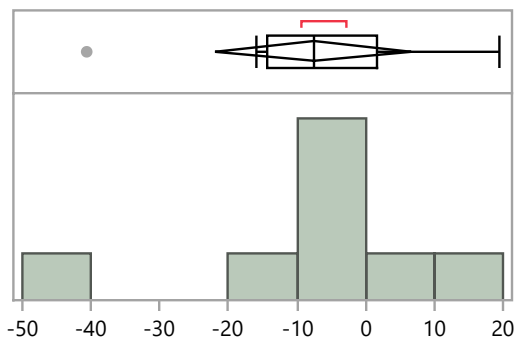
Mean	-7.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Strontium-90 Gas Flow Proportional Counter**Bias****Quantiles**

100.0%	maximum	1.4
99.5%		1.4
97.5%		1.4
90.0%		1.4
75.0%	quartile	-1.6
50.0%	median	-9.4
25.0%	quartile	-12.4
10.0%		-25.1
2.5%		-25.1
0.5%		-25.1
0.0%	minimum	-25.1

Summary Statistics

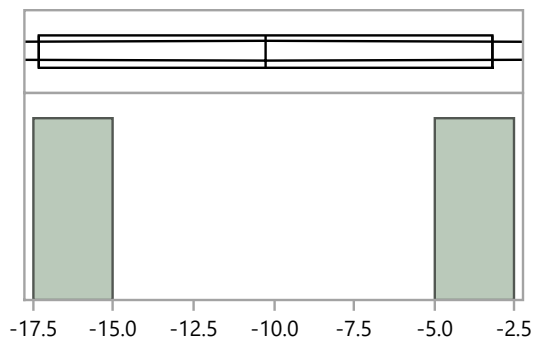
Mean	-9.4
Std Dev	8.5
Std Err Mean	3.2
Upper 95% Mean	-1.5
Lower 95% Mean	-17.3
N	7.0

RdF52 Distribution by Detection Method**Distributions Analyte_Detection=Strontium-90 Gross Alpha/Beta - 2 pi gas flow proportional counter****Bias****Quantiles**

100.0%	maximum	19.5
99.5%		19.5
97.5%		19.5
90.0%		19.5
75.0%	quartile	1.7
50.0%	median	-7.5
25.0%	quartile	-14.3
10.0%		-40.6
2.5%		-40.6
0.5%		-40.6
0.0%	minimum	-40.6

Summary Statistics

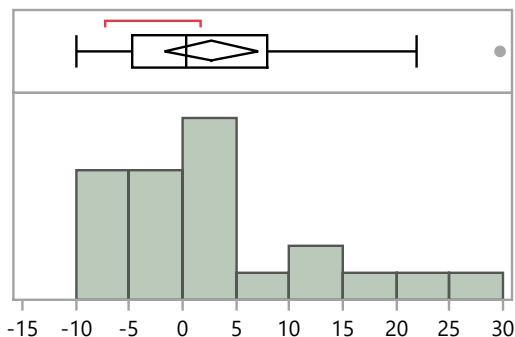
Mean	-7.6
Std Dev	17.1
Std Err Mean	6.0
Upper 95% Mean	6.7
Lower 95% Mean	-21.9
N	8.0

Distributions Analyte_Detection=Strontium-90 Liquid Scintillation Counter**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	-10.3
25.0%	quartile	-17.3
10.0%		-17.3
2.5%		-17.3
0.5%		-17.3
0.0%	minimum	-17.3

Summary Statistics

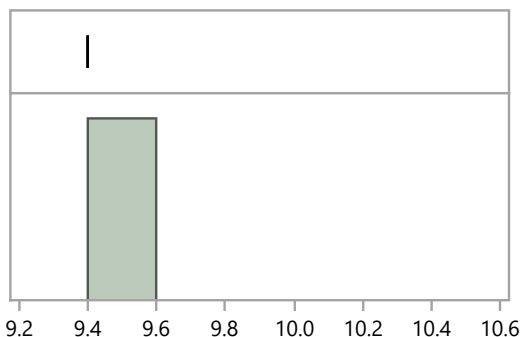
Mean	-10.3
Std Dev	10.0
Std Err Mean	7.1
Upper 95% Mean	79.3
Lower 95% Mean	-99.8
N	2.0

Distributions Analyte_Detection=Uranium-234 Alpha Spectrometry**Bias****Quantiles**

100.0%	maximum	29.7
99.5%		29.7
97.5%		29.7
90.0%		20.0
75.0%	quartile	8.0
50.0%	median	0.4
25.0%	quartile	-4.7
10.0%		-8.5
2.5%		-10.0
0.5%		-10.0
0.0%	minimum	-10.0

Summary Statistics

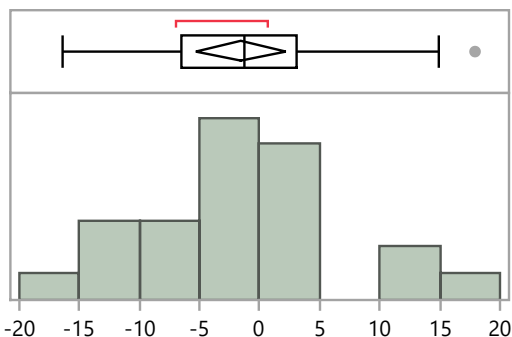
Mean	2.7
Std Dev	10.2
Std Err Mean	2.1
Upper 95% Mean	7.1
Lower 95% Mean	-1.7
N	23.0

RdF52 Distribution by Detection Method**Distributions Analyte_Detection=Uranium-234 Inductively Coupled Plasma Mass Spectrometry****Bias****Quantiles**

100.0%	maximum	9.4
99.5%		9.4
97.5%		9.4
90.0%		9.4
75.0%	quartile	9.4
50.0%	median	9.4
25.0%	quartile	9.4
10.0%		9.4
2.5%		9.4
0.5%		9.4
0.0%	minimum	9.4

Summary Statistics

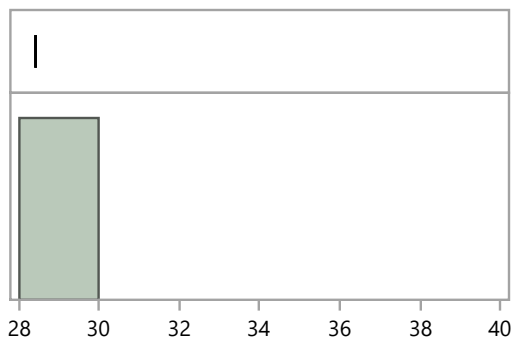
Mean	9.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Uranium-238 Alpha Spectrometry**Bias****Quantiles**

100.0%	maximum	17.9
99.5%		17.9
97.5%		17.9
90.0%		13.1
75.0%	quartile	3.0
50.0%	median	-1.3
25.0%	quartile	-6.5
10.0%		-13.9
2.5%		-16.4
0.5%		-16.4
0.0%	minimum	-16.4

Summary Statistics

Mean	-1.6
Std Dev	8.7
Std Err Mean	1.8
Upper 95% Mean	2.2
Lower 95% Mean	-5.3
N	23.0

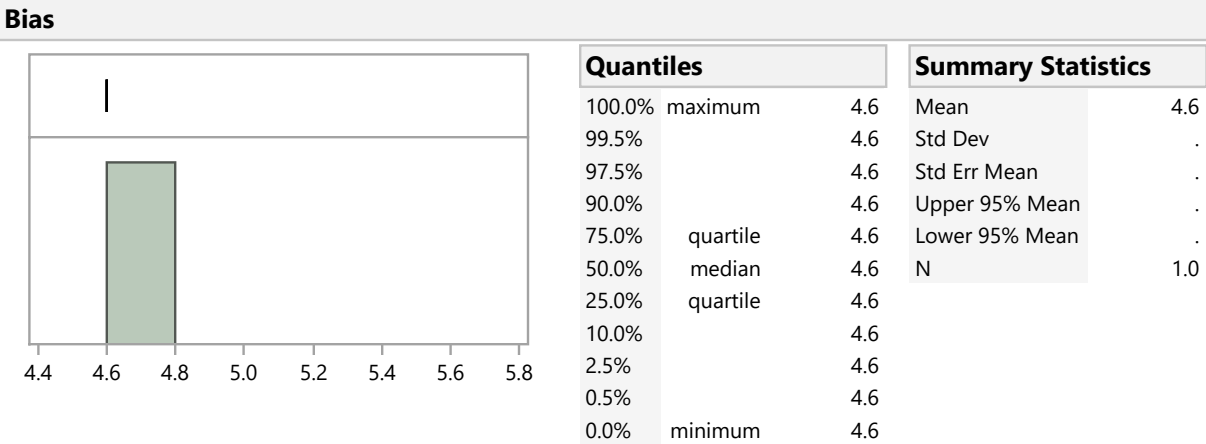
Distributions Analyte_Detection=Uranium-238 Gamma Spectrometry**Bias****Quantiles**

100.0%	maximum	28.4
99.5%		28.4
97.5%		28.4
90.0%		28.4
75.0%	quartile	28.4
50.0%	median	28.4
25.0%	quartile	28.4
10.0%		28.4
2.5%		28.4
0.5%		28.4
0.0%	minimum	28.4

Summary Statistics

Mean	28.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

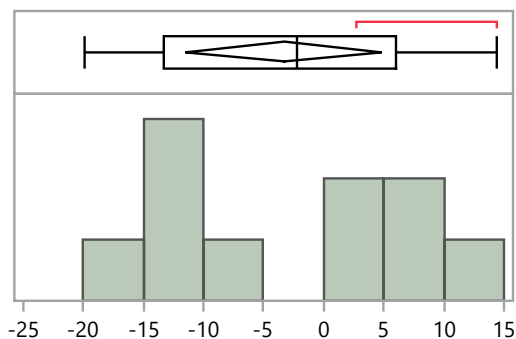
RdF52 Distribution by Detection Method
Distributions Analyte_Detection=Uranium-238 Inductively Coupled Plasma Mass Spectrometry



RdF52 Distribution by Preparation Method

Distributions Analyte_Method=Americium-241 Acid dissolution with hydrofluoric acid

Bias



Quantiles

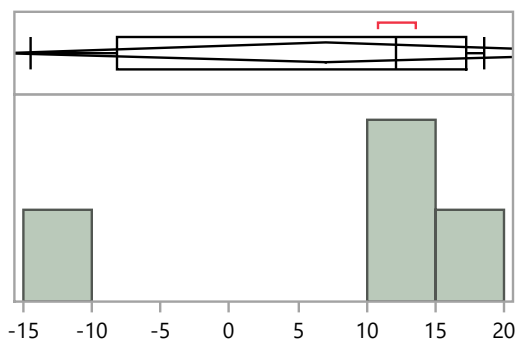
100.0%	maximum	14.4
99.5%		14.4
97.5%		14.4
90.0%		13.7
75.0%	quartile	5.9
50.0%	median	-2.2
25.0%	quartile	-13.3
10.0%		-19.4
2.5%		-19.9
0.5%		-19.9
0.0%	minimum	-19.9

Summary Statistics

Mean	-3.3
Std Dev	11.4
Std Err Mean	3.6
Upper 95% Mean	4.8
Lower 95% Mean	-11.5
N	10.0

Distributions Analyte_Method=Americium-241 Acid leaching without hydrofluoric acid

Bias



Quantiles

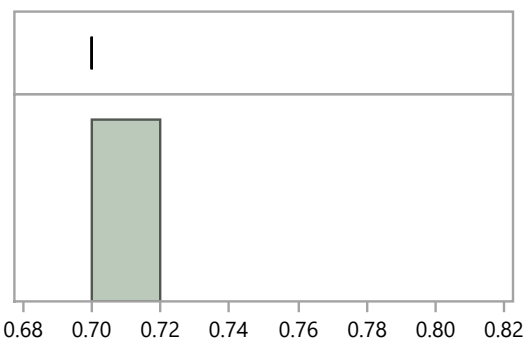
100.0%	maximum	18.5
99.5%		18.5
97.5%		18.5
90.0%		18.5
75.0%	quartile	17.3
50.0%	median	12.2
25.0%	quartile	-8.2
10.0%		-14.5
2.5%		-14.5
0.5%		-14.5
0.0%	minimum	-14.5

Summary Statistics

Mean	7.1
Std Dev	14.7
Std Err Mean	7.4
Upper 95% Mean	30.5
Lower 95% Mean	-16.4
N	4.0

Distributions Analyte_Method=Americium-241 Coprecipitation, acidified

Bias

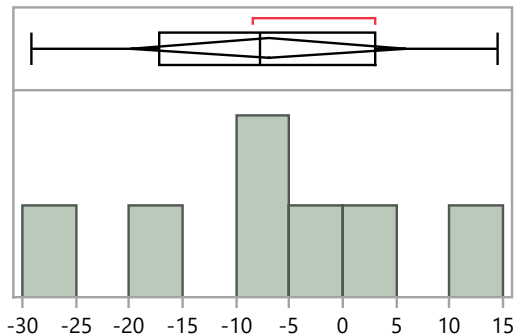


Quantiles

100.0%	maximum	0.7
99.5%		0.7
97.5%		0.7
90.0%		0.7
75.0%	quartile	0.7
50.0%	median	0.7
25.0%	quartile	0.7
10.0%		0.7
2.5%		0.7
0.5%		0.7
0.0%	minimum	0.7

Summary Statistics

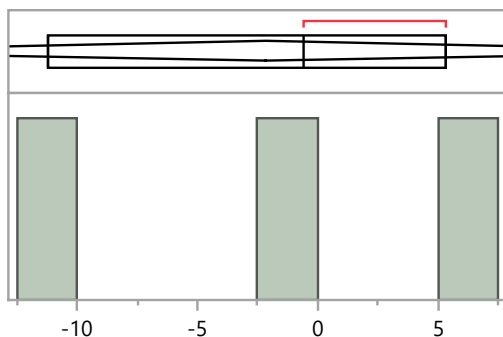
Mean	0.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Americium-241 No preparation - analyzed as received****Bias****Quantiles**

100.0%	maximum	14.4
99.5%		14.4
97.5%		14.4
90.0%		14.4
75.0%	quartile	3.0
50.0%	median	-7.8
25.0%	quartile	-17.2
10.0%		-29.1
2.5%		-29.1
0.5%		-29.1
0.0%	minimum	-29.1

Summary Statistics

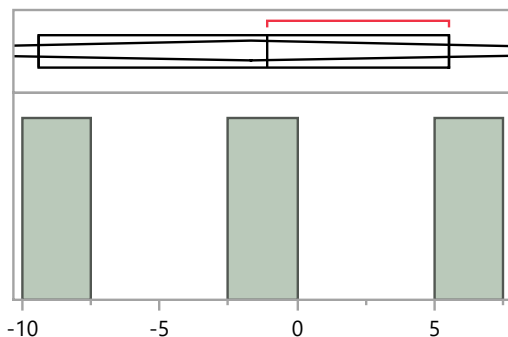
Mean	-6.9
Std Dev	13.9
Std Err Mean	5.3
Upper 95% Mean	6.0
Lower 95% Mean	-19.8
N	7.0

Distributions Analyte_Method=Americium-241 Other**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	-0.6
25.0%	quartile	-11.2
10.0%		-11.2
2.5%		-11.2
0.5%		-11.2
0.0%	minimum	-11.2

Summary Statistics

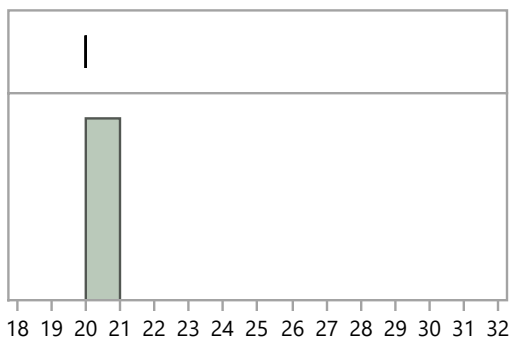
Mean	-2.2
Std Dev	8.4
Std Err Mean	4.8
Upper 95% Mean	18.6
Lower 95% Mean	-22.9
N	3.0

Distributions Analyte_Method=Americium-241 Total dissolution by fusion**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	-1.1
25.0%	quartile	-9.4
10.0%		-9.4
2.5%		-9.4
0.5%		-9.4
0.0%	minimum	-9.4

Summary Statistics

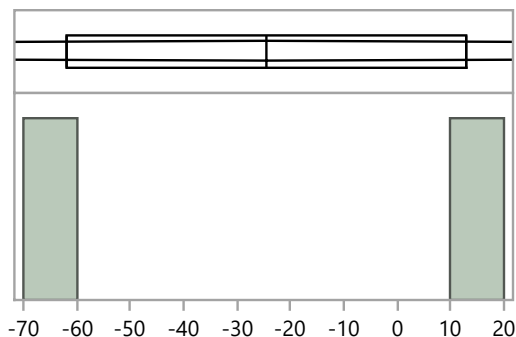
Mean	-1.7
Std Dev	7.5
Std Err Mean	4.3
Upper 95% Mean	16.9
Lower 95% Mean	-20.2
N	3.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Cesium-134 Acid dissolution with hydrofluoric acid****Bias****Quantiles**

100.0%	maximum	20.0
99.5%		20.0
97.5%		20.0
90.0%		20.0
75.0%	quartile	20.0
50.0%	median	20.0
25.0%	quartile	20.0
10.0%		20.0
2.5%		20.0
0.5%		20.0
0.0%	minimum	20.0

Summary Statistics

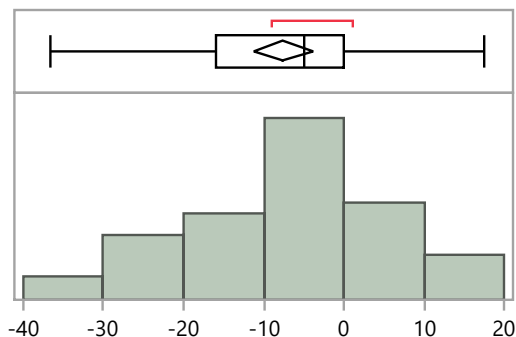
Mean	20.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-134 EPA 901.1, Gamma Emitting, 600/4-80-032**Bias****Quantiles**

100.0%	maximum	12.9
99.5%		12.9
97.5%		12.9
90.0%		12.9
75.0%	quartile	12.9
50.0%	median	-24.5
25.0%	quartile	-61.8
10.0%		-61.8
2.5%		-61.8
0.5%		-61.8
0.0%	minimum	-61.8

Summary Statistics

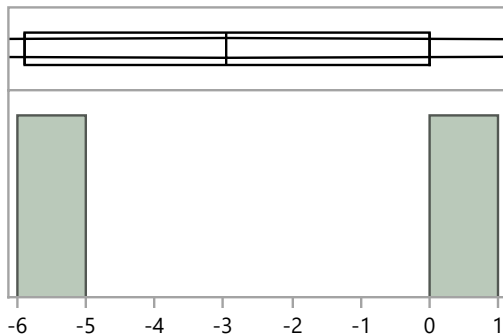
Mean	-24.5
Std Dev	52.8
Std Err Mean	37.4
Upper 95% Mean	450.1
Lower 95% Mean	-499.0
N	2.0

Distributions Analyte_Method=Cesium-134 No preparation - analyzed as received**Bias****Quantiles**

100.0%	maximum	17.6
99.5%		17.6
97.5%		17.2
90.0%		7.3
75.0%	quartile	0.0
50.0%	median	-5.0
25.0%	quartile	-16.1
10.0%		-27.2
2.5%		-36.3
0.5%		-36.5
0.0%	minimum	-36.5

Summary Statistics

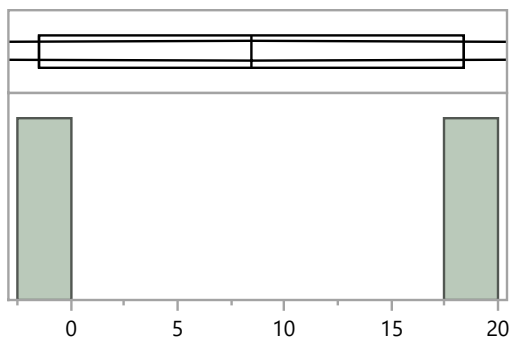
Mean	-7.6
Std Dev	12.6
Std Err Mean	1.9
Upper 95% Mean	-3.8
Lower 95% Mean	-11.3
N	46.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Cesium-134 Other****Bias****Quantiles**

100.0%	maximum	0.0
99.5%		0.0
97.5%		0.0
90.0%		0.0
75.0%	quartile	0.0
50.0%	median	-3.0
25.0%	quartile	-5.9
10.0%		-5.9
2.5%		-5.9
0.5%		-5.9
0.0%	minimum	-5.9

Summary Statistics

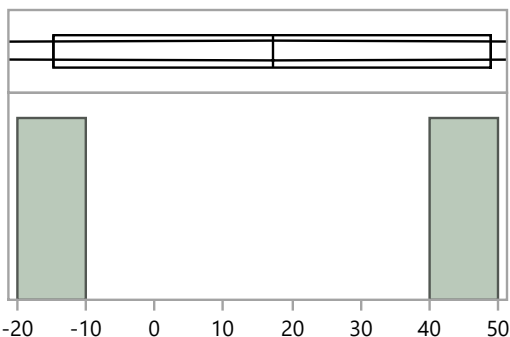
Mean	-3.0
Std Dev	4.2
Std Err Mean	3.0
Upper 95% Mean	34.5
Lower 95% Mean	-40.4
N	2.0

Distributions Analyte_Method=Cesium-137 Acid dissolution with hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	18.4
99.5%		18.4
97.5%		18.4
90.0%		18.4
75.0%	quartile	18.4
50.0%	median	8.5
25.0%	quartile	-1.5
10.0%		-1.5
2.5%		-1.5
0.5%		-1.5
0.0%	minimum	-1.5

Summary Statistics

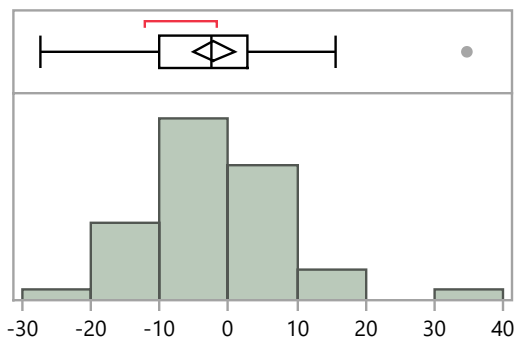
Mean	8.5
Std Dev	14.1
Std Err Mean	10.0
Upper 95% Mean	134.9
Lower 95% Mean	-118.0
N	2.0

Distributions Analyte_Method=Cesium-137 EPA 901.1, Gamma Emitting, 600/4-80-032**Bias****Quantiles**

100.0%	maximum	49.0
99.5%		49.0
97.5%		49.0
90.0%		49.0
75.0%	quartile	49.0
50.0%	median	17.2
25.0%	quartile	-14.6
10.0%		-14.6
2.5%		-14.6
0.5%		-14.6
0.0%	minimum	-14.6

Summary Statistics

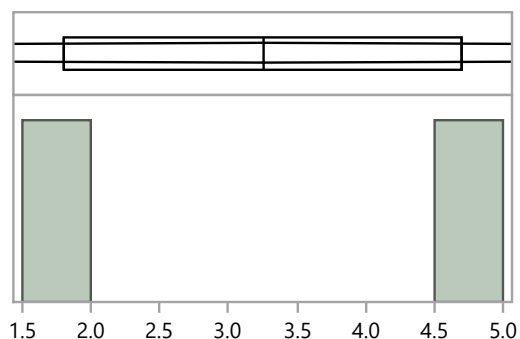
Mean	17.2
Std Dev	45.0
Std Err Mean	31.8
Upper 95% Mean	421.3
Lower 95% Mean	-386.9
N	2.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Cesium-137 No preparation - analyzed as received****Bias****Quantiles**

100.0%	maximum	34.7
99.5%		34.7
97.5%		31.3
90.0%		10.0
75.0%	quartile	2.7
50.0%	median	-2.5
25.0%	quartile	-9.9
10.0%		-11.7
2.5%		-25.8
0.5%		-27.4
0.0%	minimum	-27.4

Summary Statistics

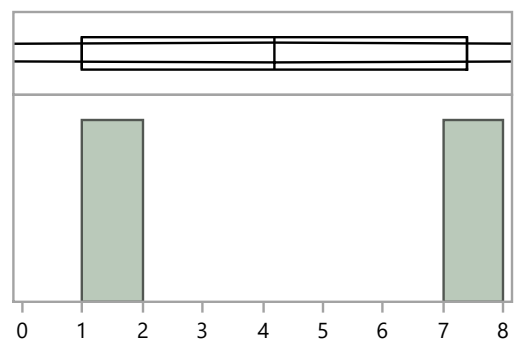
Mean	-2.2
Std Dev	10.1
Std Err Mean	1.5
Upper 95% Mean	0.8
Lower 95% Mean	-5.2
N	46.0

Distributions Analyte_Method=Cesium-137 Other**Bias****Quantiles**

100.0%	maximum	4.7
99.5%		4.7
97.5%		4.7
90.0%		4.7
75.0%	quartile	4.7
50.0%	median	3.3
25.0%	quartile	1.8
10.0%		1.8
2.5%		1.8
0.5%		1.8
0.0%	minimum	1.8

Summary Statistics

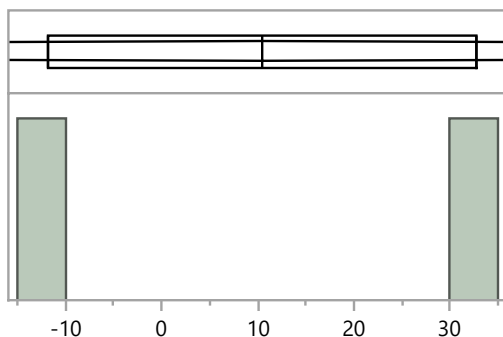
Mean	3.3
Std Dev	2.1
Std Err Mean	1.5
Upper 95% Mean	21.7
Lower 95% Mean	-15.2
N	2.0

Distributions Analyte_Method=Cobalt-60 Acid dissolution with hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	7.4
99.5%		7.4
97.5%		7.4
90.0%		7.4
75.0%	quartile	7.4
50.0%	median	4.2
25.0%	quartile	1.0
10.0%		1.0
2.5%		1.0
0.5%		1.0
0.0%	minimum	1.0

Summary Statistics

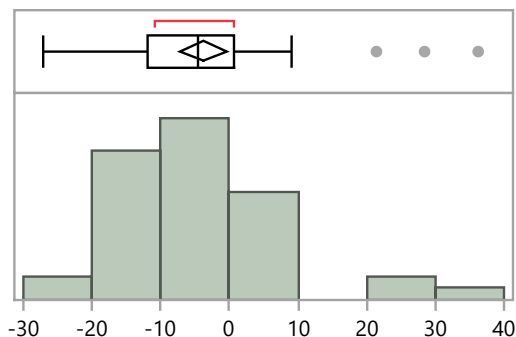
Mean	4.2
Std Dev	4.5
Std Err Mean	3.2
Upper 95% Mean	44.9
Lower 95% Mean	-36.5
N	2.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Cobalt-60 EPA 901.1, Gamma Emitting, 600/4-80-032****Bias****Quantiles**

100.0%	maximum	32.7
99.5%		32.7
97.5%		32.7
90.0%		32.7
75.0%	quartile	32.7
50.0%	median	10.5
25.0%	quartile	-11.7
10.0%		-11.7
2.5%		-11.7
0.5%		-11.7
0.0%	minimum	-11.7

Summary Statistics

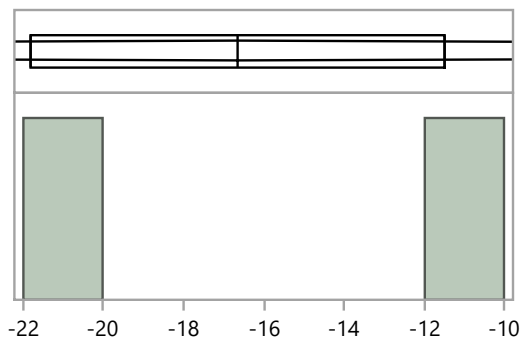
Mean	10.5
Std Dev	31.4
Std Err Mean	22.2
Upper 95% Mean	292.6
Lower 95% Mean	-271.6
N	2.0

Distributions Analyte_Method=Cobalt-60 No preparation - analyzed as received**Bias****Quantiles**

100.0%	maximum	36.2
99.5%		36.2
97.5%		34.8
90.0%		9.1
75.0%	quartile	0.8
50.0%	median	-4.5
25.0%	quartile	-12.0
10.0%		-15.4
2.5%		-26.2
0.5%		-27.2
0.0%	minimum	-27.2

Summary Statistics

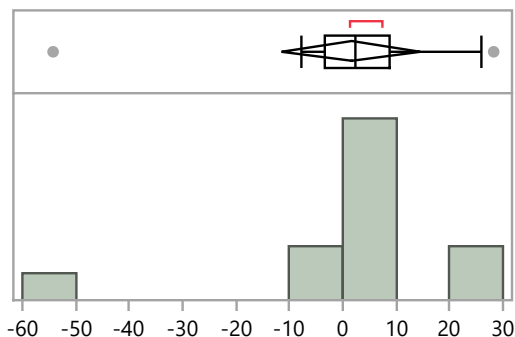
Mean	-3.8
Std Dev	11.8
Std Err Mean	1.7
Upper 95% Mean	-0.3
Lower 95% Mean	-7.3
N	46.0

Distributions Analyte_Method=Cobalt-60 Other**Bias****Quantiles**

100.0%	maximum	-11.5
99.5%		-11.5
97.5%		-11.5
90.0%		-11.5
75.0%	quartile	-11.5
50.0%	median	-16.7
25.0%	quartile	-21.8
10.0%		-21.8
2.5%		-21.8
0.5%		-21.8
0.0%	minimum	-21.8

Summary Statistics

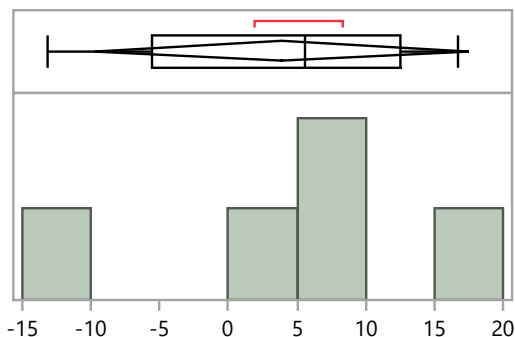
Mean	-16.7
Std Dev	7.3
Std Err Mean	5.2
Upper 95% Mean	48.8
Lower 95% Mean	-82.1
N	2.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Plutonium-238 Acid dissolution with hydrofluoric acid****Bias****Quantiles**

100.0%	maximum	28.2
99.5%		28.2
97.5%		28.2
90.0%		27.5
75.0%	quartile	8.8
50.0%	median	2.5
25.0%	quartile	-3.5
10.0%		-40.3
2.5%		-54.2
0.5%		-54.2
0.0%	minimum	-54.2

Summary Statistics

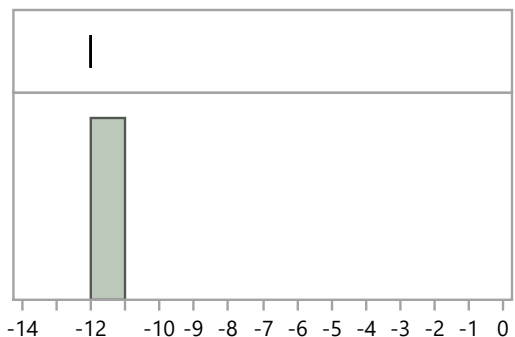
Mean	1.5
Std Dev	20.6
Std Err Mean	5.9
Upper 95% Mean	14.6
Lower 95% Mean	-11.6
N	12.0

Distributions Analyte_Method=Plutonium-238 Acid leaching without hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	16.7
99.5%		16.7
97.5%		16.7
90.0%		16.7
75.0%	quartile	12.5
50.0%	median	5.6
25.0%	quartile	-5.6
10.0%		-13.1
2.5%		-13.1
0.5%		-13.1
0.0%	minimum	-13.1

Summary Statistics

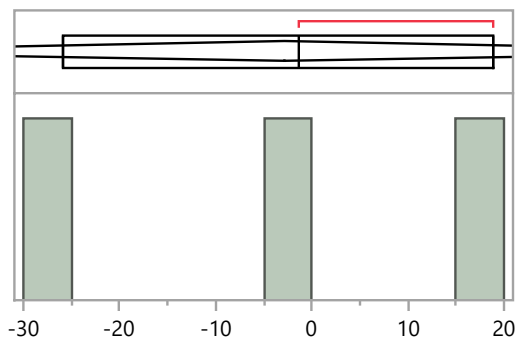
Mean	3.9
Std Dev	10.9
Std Err Mean	4.9
Upper 95% Mean	17.5
Lower 95% Mean	-9.7
N	5.0

Distributions Analyte_Method=Plutonium-238 Coprecipitation, acidified**Bias****Quantiles**

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

Summary Statistics

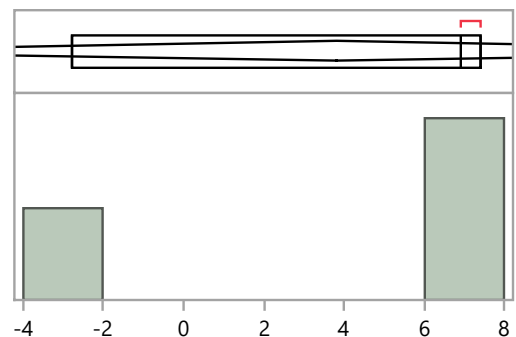
Mean	-12.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Plutonium-238 Other****Bias****Quantiles**

100.0%	maximum	18.8
99.5%		18.8
97.5%		18.8
90.0%		18.8
75.0%	quartile	18.8
50.0%	median	-1.4
25.0%	quartile	-25.9
10.0%		-25.9
2.5%		-25.9
0.5%		-25.9
0.0%	minimum	-25.9

Summary Statistics

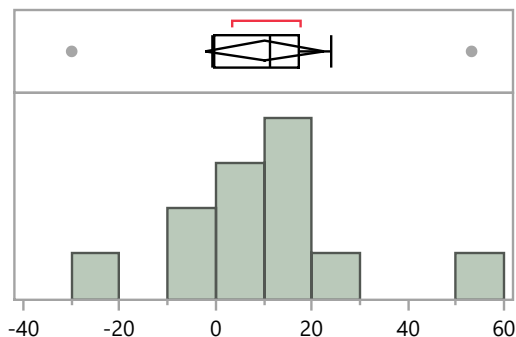
Mean	-2.8
Std Dev	22.4
Std Err Mean	12.9
Upper 95% Mean	52.8
Lower 95% Mean	-58.4
N	3.0

Distributions Analyte_Method=Plutonium-238 Total dissolution by fusion**Bias****Quantiles**

100.0%	maximum	7.4
99.5%		7.4
97.5%		7.4
90.0%		7.4
75.0%	quartile	7.4
50.0%	median	6.9
25.0%	quartile	-2.8
10.0%		-2.8
2.5%		-2.8
0.5%		-2.8
0.0%	minimum	-2.8

Summary Statistics

Mean	3.8
Std Dev	5.8
Std Err Mean	3.3
Upper 95% Mean	18.1
Lower 95% Mean	-10.5
N	3.0

Distributions Analyte_Method=Plutonium-239/240 Acid dissolution with hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	53.2
99.5%		53.2
97.5%		53.2
90.0%		44.4
75.0%	quartile	17.4
50.0%	median	11.4
25.0%	quartile	-0.3
10.0%		-21.1
2.5%		-29.9
0.5%		-29.9
0.0%	minimum	-29.9

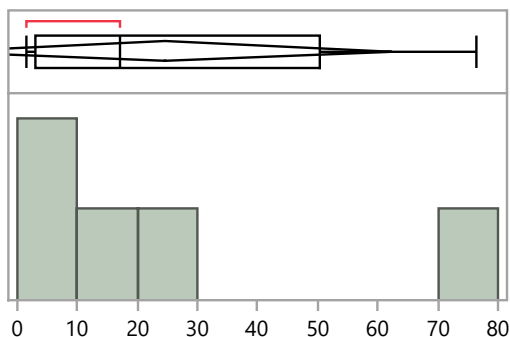
Summary Statistics

Mean	10.1
Std Dev	19.4
Std Err Mean	5.6
Upper 95% Mean	22.5
Lower 95% Mean	-2.2
N	12.0

RdF52 Distribution by Preparation Method

Distributions Analyte_Method=Plutonium-239/240 Acid leaching without hydrofluoric acid

Bias



Quantiles

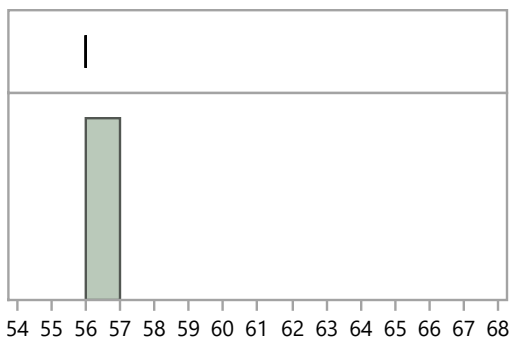
100.0%	maximum	76.4
99.5%		76.4
97.5%		76.4
90.0%		76.4
75.0%	quartile	50.3
50.0%	median	17.0
25.0%	quartile	3.0
10.0%		1.6
2.5%		1.6
0.5%		1.6
0.0%	minimum	1.6

Summary Statistics

Mean	24.7
Std Dev	30.3
Std Err Mean	13.6
Upper 95% Mean	62.4
Lower 95% Mean	-13.0
N	5.0

Distributions Analyte_Method=Plutonium-239/240 Coprecipitation, acidified

Bias



Quantiles

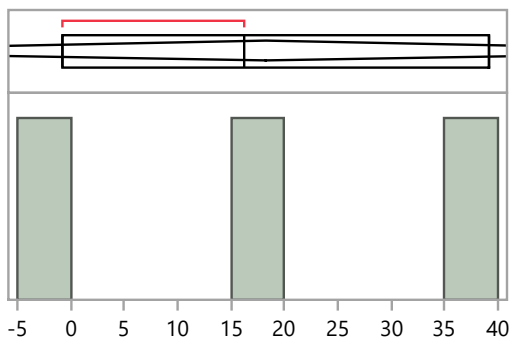
100.0%	maximum	56.0
99.5%		56.0
97.5%		56.0
90.0%		56.0
75.0%	quartile	56.0
50.0%	median	56.0
25.0%	quartile	56.0
10.0%		56.0
2.5%		56.0
0.5%		56.0
0.0%	minimum	56.0

Summary Statistics

Mean	56.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-239/240 Other

Bias

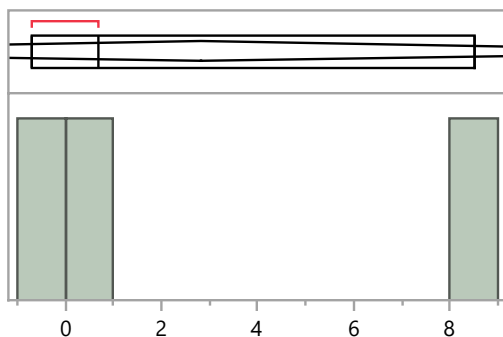


Quantiles

100.0%	maximum	39.1
99.5%		39.1
97.5%		39.1
90.0%		39.1
75.0%	quartile	39.1
50.0%	median	16.3
25.0%	quartile	-0.7
10.0%		-0.7
2.5%		-0.7
0.5%		-0.7
0.0%	minimum	-0.7

Summary Statistics

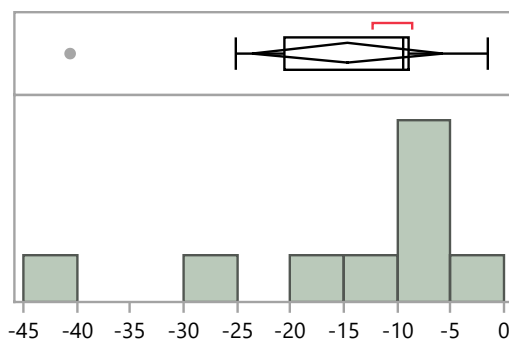
Mean	18.2
Std Dev	20.0
Std Err Mean	11.5
Upper 95% Mean	67.8
Lower 95% Mean	-31.4
N	3.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Plutonium-239/240 Total dissolution by fusion****Bias****Quantiles**

100.0%	maximum	8.5
99.5%		8.5
97.5%		8.5
90.0%		8.5
75.0%	quartile	8.5
50.0%	median	0.7
25.0%	quartile	-0.7
10.0%		-0.7
2.5%		-0.7
0.5%		-0.7
0.0%	minimum	-0.7

Summary Statistics

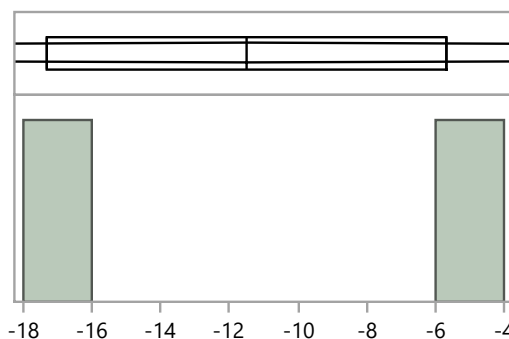
Mean	2.8
Std Dev	5.0
Std Err Mean	2.9
Upper 95% Mean	15.1
Lower 95% Mean	-9.5
N	3.0

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	-8.9
50.0%	median	-9.4
25.0%	quartile	-20.5
10.0%		-40.6
2.5%		-40.6
0.5%		-40.6
0.0%	minimum	-40.6

Summary Statistics

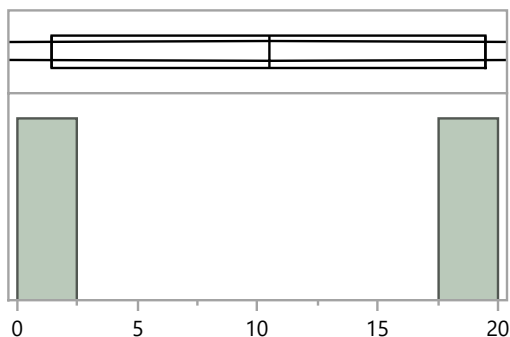
Mean	-14.7
Std Dev	11.6
Std Err Mean	3.9
Upper 95% Mean	-5.8
Lower 95% Mean	-23.6
N	9.0

Distributions Analyte_Method=Strontium-90 Acid leaching without hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	-5.7
99.5%		-5.7
97.5%		-5.7
90.0%		-5.7
75.0%	quartile	-5.7
50.0%	median	-11.5
25.0%	quartile	-17.3
10.0%		-17.3
2.5%		-17.3
0.5%		-17.3
0.0%	minimum	-17.3

Summary Statistics

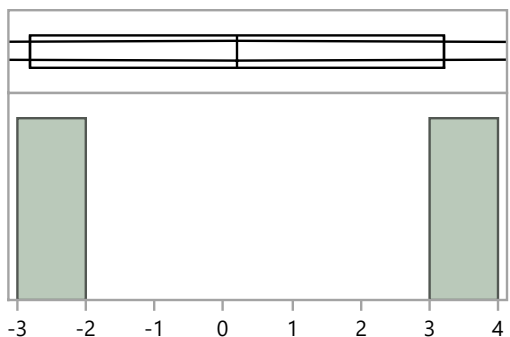
Mean	-11.5
Std Dev	8.2
Std Err Mean	5.8
Upper 95% Mean	62.2
Lower 95% Mean	-85.2
N	2.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Strontium-90 EPA 905, Radioactive Strontium, 600/4-80-032****Bias****Quantiles**

100.0%	maximum	19.5
99.5%		19.5
97.5%		19.5
90.0%		19.5
75.0%	quartile	19.5
50.0%	median	10.5
25.0%	quartile	1.4
10.0%		1.4
2.5%		1.4
0.5%		1.4
0.0%	minimum	1.4

Summary Statistics

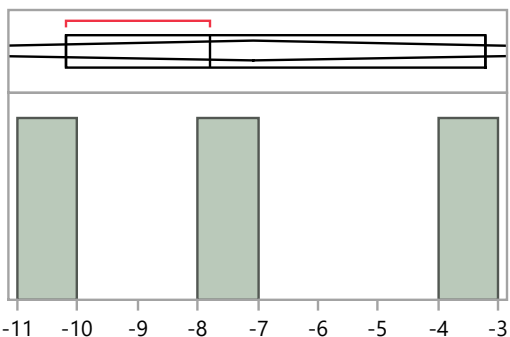
Mean	10.5
Std Dev	12.8
Std Err Mean	9.1
Upper 95% Mean	125.4
Lower 95% Mean	-104.5
N	2.0

Distributions Analyte_Method=Strontium-90 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	0.2
25.0%	quartile	-2.8
10.0%		-2.8
2.5%		-2.8
0.5%		-2.8
0.0%	minimum	-2.8

Summary Statistics

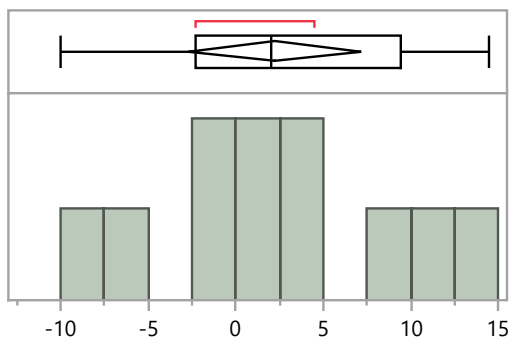
Mean	0.2
Std Dev	4.2
Std Err Mean	3.0
Upper 95% Mean	38.3
Lower 95% Mean	-37.9
N	2.0

Distributions Analyte_Method=Strontium-90 Total dissolution by fusion**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	-7.8
25.0%	quartile	-10.2
10.0%		-10.2
2.5%		-10.2
0.5%		-10.2
0.0%	minimum	-10.2

Summary Statistics

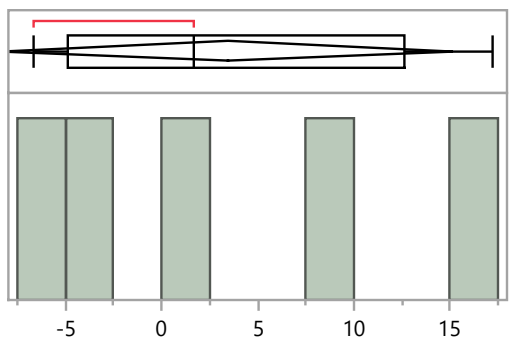
Mean	-7.1
Std Dev	3.6
Std Err Mean	2.1
Upper 95% Mean	1.8
Lower 95% Mean	-15.9
N	3.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Uranium-234 Acid dissolution with hydrofluoric acid****Bias****Quantiles**

100.0%	maximum	14.5
99.5%		14.5
97.5%		14.5
90.0%		13.7
75.0%	quartile	9.4
50.0%	median	2.0
25.0%	quartile	-2.3
10.0%		-9.4
2.5%		-10.0
0.5%		-10.0
0.0%	minimum	-10.0

Summary Statistics

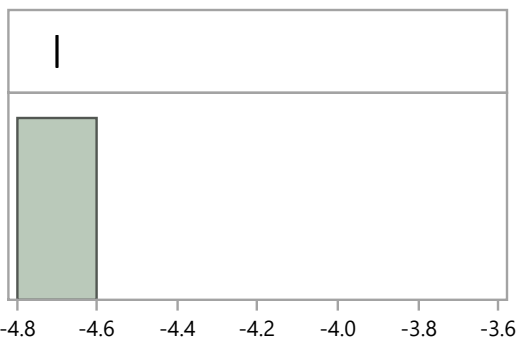
Mean	2.2
Std Dev	7.4
Std Err Mean	2.2
Upper 95% Mean	7.2
Lower 95% Mean	-2.7
N	11.0

Distributions Analyte_Method=Uranium-234 Acid leaching without hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	17.2
99.5%		17.2
97.5%		17.2
90.0%		17.2
75.0%	quartile	12.6
50.0%	median	1.7
25.0%	quartile	-4.9
10.0%		-6.6
2.5%		-6.6
0.5%		-6.6
0.0%	minimum	-6.6

Summary Statistics

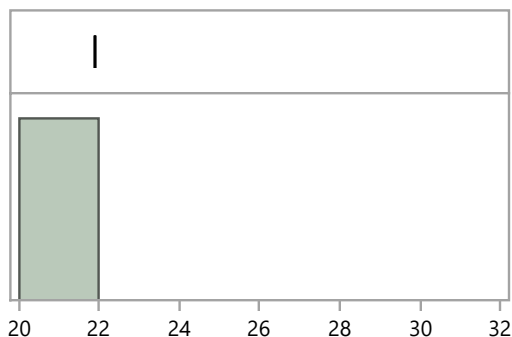
Mean	3.4
Std Dev	9.4
Std Err Mean	4.2
Upper 95% Mean	15.2
Lower 95% Mean	-8.3
N	5.0

Distributions Analyte_Method=Uranium-234 Coprecipitation, acidified**Bias****Quantiles**

100.0%	maximum	-4.7
99.5%		-4.7
97.5%		-4.7
90.0%		-4.7
75.0%	quartile	-4.7
50.0%	median	-4.7
25.0%	quartile	-4.7
10.0%		-4.7
2.5%		-4.7
0.5%		-4.7
0.0%	minimum	-4.7

Summary Statistics

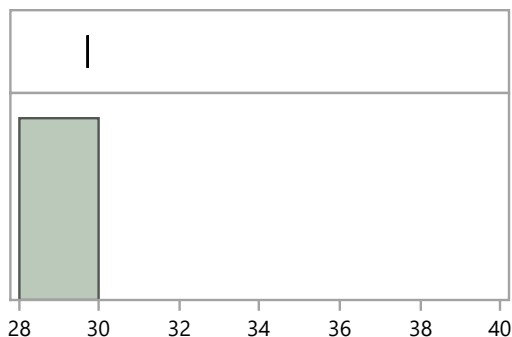
Mean	-4.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Uranium-234 EPA 908, Uranium-Radiochemical Method, 600/4/80-032****Bias****Quantiles**

100.0%	maximum	21.9
99.5%		21.9
97.5%		21.9
90.0%		21.9
75.0%	quartile	21.9
50.0%	median	21.9
25.0%	quartile	21.9
10.0%		21.9
2.5%		21.9
0.5%		21.9
0.0%	minimum	21.9

Summary Statistics

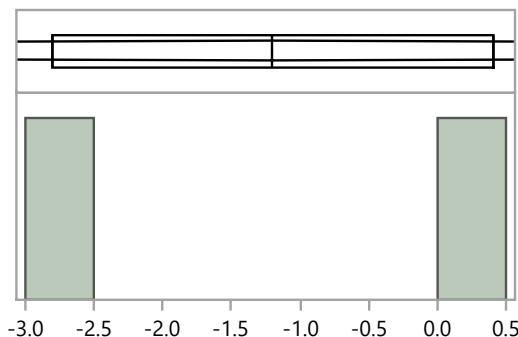
Mean	21.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Evaporation, acidified**Bias****Quantiles**

100.0%	maximum	29.7
99.5%		29.7
97.5%		29.7
90.0%		29.7
75.0%	quartile	29.7
50.0%	median	29.7
25.0%	quartile	29.7
10.0%		29.7
2.5%		29.7
0.5%		29.7
0.0%	minimum	29.7

Summary Statistics

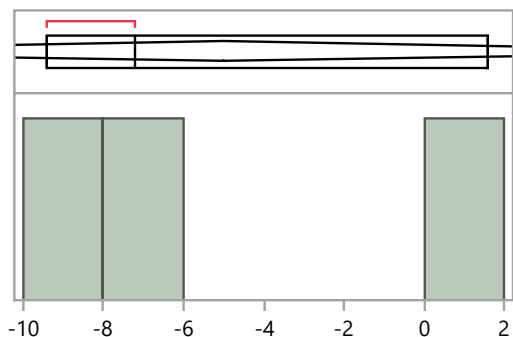
Mean	29.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Other**Bias****Quantiles**

100.0%	maximum	0.4
99.5%		0.4
97.5%		0.4
90.0%		0.4
75.0%	quartile	0.4
50.0%	median	-1.2
25.0%	quartile	-2.8
10.0%		-2.8
2.5%		-2.8
0.5%		-2.8
0.0%	minimum	-2.8

Summary Statistics

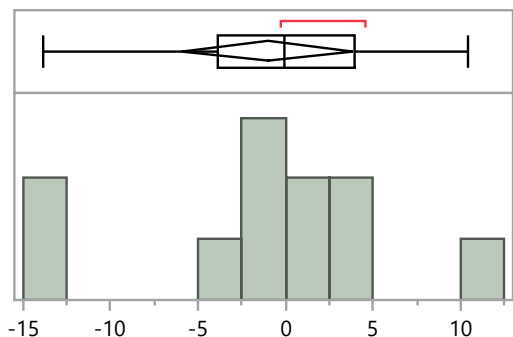
Mean	-1.2
Std Dev	2.3
Std Err Mean	1.6
Upper 95% Mean	19.1
Lower 95% Mean	-21.5
N	2.0

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Uranium-234 Total dissolution by fusion****Bias****Quantiles**

100.0%	maximum	1.6
99.5%		1.6
97.5%		1.6
90.0%		1.6
75.0%	quartile	1.6
50.0%	median	-7.2
25.0%	quartile	-9.4
10.0%		-9.4
2.5%		-9.4
0.5%		-9.4
0.0%	minimum	-9.4

Summary Statistics

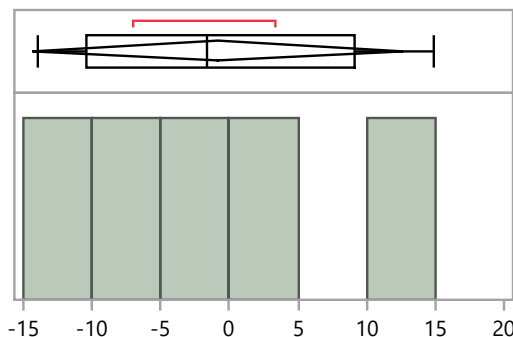
Mean	-5.0
Std Dev	5.8
Std Err Mean	3.4
Upper 95% Mean	9.5
Lower 95% Mean	-19.5
N	3.0

Distributions Analyte_Method=Uranium-238 Acid dissolution with hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	10.4
99.5%		10.4
97.5%		10.4
90.0%		9.2
75.0%	quartile	3.9
50.0%	median	-0.1
25.0%	quartile	-3.9
10.0%		-13.8
2.5%		-13.9
0.5%		-13.9
0.0%	minimum	-13.9

Summary Statistics

Mean	-1.0
Std Dev	7.3
Std Err Mean	2.2
Upper 95% Mean	3.8
Lower 95% Mean	-5.9
N	11.0

Distributions Analyte_Method=Uranium-238 Acid leaching without hydrofluoric acid**Bias****Quantiles**

100.0%	maximum	14.9
99.5%		14.9
97.5%		14.9
90.0%		14.9
75.0%	quartile	9.1
50.0%	median	-1.6
25.0%	quartile	-10.5
10.0%		-13.9
2.5%		-13.9
0.5%		-13.9
0.0%	minimum	-13.9

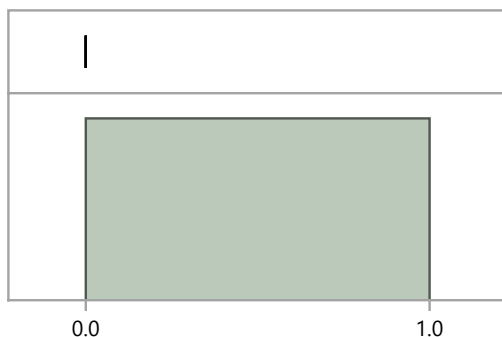
Summary Statistics

Mean	-0.9
Std Dev	10.9
Std Err Mean	4.9
Upper 95% Mean	12.7
Lower 95% Mean	-14.4
N	5.0

RdF52 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-238 Coprecipitation, acidified

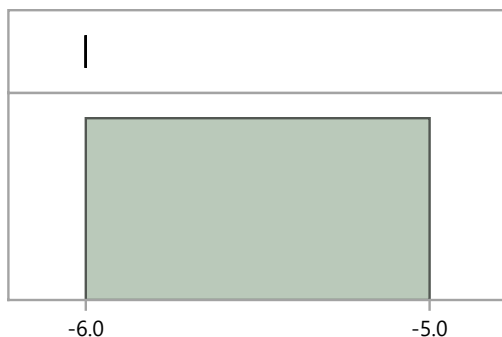
Bias



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_Method=Uranium-238 EPA 908, Uranium-Radiochemical Method, 600/4/80-032

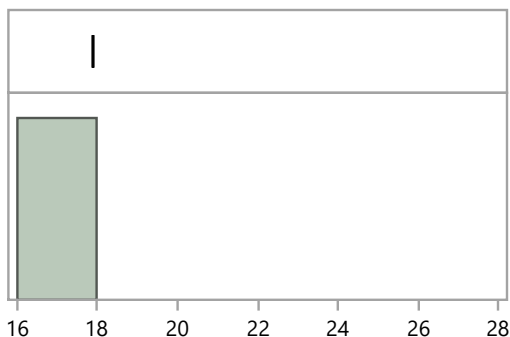
Bias



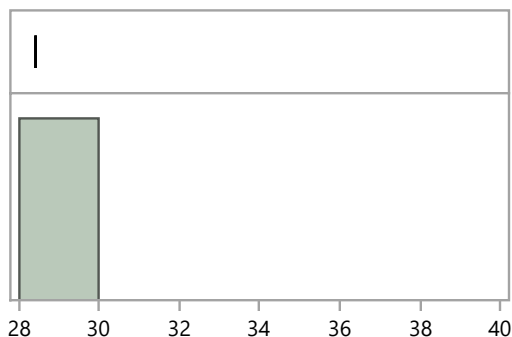
Quantiles			Summary Statistics	
100.0%	maximum	-6.0	Mean	-6.0
99.5%		-6.0	Std Dev	.
97.5%		-6.0	Std Err Mean	.
90.0%		-6.0	Upper 95% Mean	.
75.0%	quartile	-6.0	Lower 95% Mean	.
50.0%	median	-6.0	N	1.0
25.0%	quartile	-6.0		
10.0%		-6.0		
2.5%		-6.0		
0.5%		-6.0		
0.0%	minimum	-6.0		

Distributions Analyte_Method=Uranium-238 Evaporation, acidified

Bias



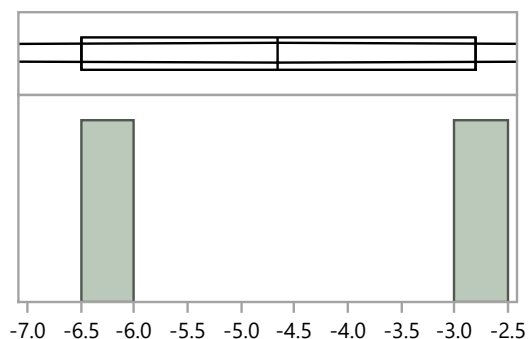
Quantiles			Summary Statistics	
100.0%	maximum	17.9	Mean	17.9
99.5%		17.9	Std Dev	.
97.5%		17.9	Std Err Mean	.
90.0%		17.9	Upper 95% Mean	.
75.0%	quartile	17.9	Lower 95% Mean	.
50.0%	median	17.9	N	1.0
25.0%	quartile	17.9		
10.0%		17.9		
2.5%		17.9		
0.5%		17.9		
0.0%	minimum	17.9		

RdF52 Distribution by Preparation Method**Distributions Analyte_Method=Uranium-238 No preparation - analyzed as received****Bias****Quantiles**

100.0%	maximum	28.4
99.5%		28.4
97.5%		28.4
90.0%		28.4
75.0%	quartile	28.4
50.0%	median	28.4
25.0%	quartile	28.4
10.0%		28.4
2.5%		28.4
0.5%		28.4
0.0%	minimum	28.4

Summary Statistics

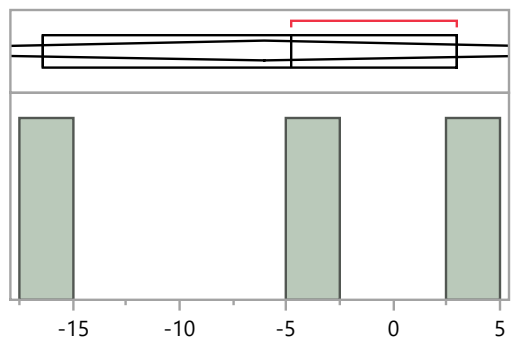
Mean	28.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-238 Other**Bias****Quantiles**

100.0%	maximum	-2.8
99.5%		-2.8
97.5%		-2.8
90.0%		-2.8
75.0%	quartile	-2.8
50.0%	median	-4.7
25.0%	quartile	-6.5
10.0%		-6.5
2.5%		-6.5
0.5%		-6.5
0.0%	minimum	-6.5

Summary Statistics

Mean	-4.7
Std Dev	2.6
Std Err Mean	1.9
Upper 95% Mean	18.9
Lower 95% Mean	-28.2
N	2.0

Distributions Analyte_Method=Uranium-238 Total dissolution by fusion**Bias****Quantiles**

100.0%	maximum	3.0
99.5%		3.0
97.5%		3.0
90.0%		3.0
75.0%	quartile	3.0
50.0%	median	-4.8
25.0%	quartile	-16.4
10.0%		-16.4
2.5%		-16.4
0.5%		-16.4
0.0%	minimum	-16.4

Summary Statistics

Mean	-6.1
Std Dev	9.8
Std Err Mean	5.6
Upper 95% Mean	18.2
Lower 95% Mean	-30.3
N	3.0