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XrM40 Participating Laboratories

Lab Code	Lab Name	Matrix Code
AFOH01	USAFSAM/OEA	XrM
DINL99	Departamento Ingeniería Nuclear y Mecánica de Fluidos	XrM
EULC01	EnergySolutions, LLC	XrM
FDHE01	Florida Dept of Health Environmental Laboratory	XrM
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab	XrM
FMEC99	Foods and Water Laboratories Center	XrM
GENE01	GEL Laboratories, LLC	XrM
HPAC99	PHE, CRCE Glasgow	XrM
LAWR01	LAWRENCE BERKELEY NATIONAL LABORATORY	XrM
LDRA99	Laboratori de Radiologia Ambiental-Universitat de Barcelona	XrM
MALA99	Alypz Sdn. Bhd.	XrM
NARL01	National Analytical Radiation Environmental Laboratory	XrM
NARL02	USEPA - NAREL - MERL	XrM
NOCS99	National Oceanography Centre, Southampton	XrM
ODHL01	Ohio Department of Health Laboratory	XrM
RAVR99	Radiactividad Ambiental y Vigilancia Radiologica	XrM
SEML01	SRS Environmental Monitoring Laboratory	XrM
SRPD01	Sandia National Laboratories, Radiation Protection Sample Diagnostics	XrM
TELE02	ATI Environmental, Inc., Midwest Lab	XrM

Laboratories Not Reporting

Lab Code	Lab Name	Matrix Code
AMEC99	Wood Nuclear Limited - Analytical Services	XrM
ASUK99	AWE (Aldermaston)	XrM
CSSL99	Chemistry Support Services	XrM
EUTU99	UniTech Services Group, Ltd	XrM
IAEA99	International Atomic Energy Agency	XrM
SOUT01	Southwest Research Institute	XrM

Study Reference Values

MAPEP-19-XrM40

Radiological Reference Date: 02/01/2019

Analyte	Ref Value	Ref Unc
Radiological	Units: (Bq/sample)	
Americium-241	0.0246	0.0006
Cesium-134	0.512	0.014
Cesium-137	0.442	0.011
Cobalt-57	0.144	0.004
Cobalt-60	0.269	0.008
Plutonium-238	0.0161	0.0004
Plutonium-239/240	0.0115	0.0003
Strontium-90	0.126	0.004
Technetium-99	0.307	0.009
Uranium-234	0.00161	0.00005
Uranium-238	0.0122	0.0004
Zinc-65	0.0345	0.0010

The XrM40 is a nasal swab sample matrix.

Sample Statistical Summary

MAPEP-19-XrM40

Radiological Reference Date: 02/01/2019

Analyte	T(1)	Grand(2) Mean	Std Dev	Ref Value	Ref Unc
Radiological				Units: (Bq/sample)	
Americium-241	8			0.0246	0.0006
Cesium-134	18	0.504	0.074	0.512	0.014
Cesium-137	19	0.469	0.059	0.442	0.011
Cobalt-57	18	0.151	0.022	0.144	0.004
Cobalt-60	19	0.274	0.040	0.269	0.008
Plutonium-238	7	0.0155	0.0012	0.0161	0.0004
Plutonium-239/240	7	0.0112	0.0011	0.0115	0.0003
Strontium-90	8	0.120	0.021	0.126	0.004
Technetium-99				0.307	0.009
Uranium-234	8			0.00161	0.00005
Uranium-238	9	0.0121	0.0011	0.0122	0.0004
Zinc-65	7			0.0345	0.0010

Note: (1) T = Total number of laboratories reporting analyte.
(2) Mean excludes values outside of a bias range of +/- 30%.

The XrM40 is a nasal swab sample matrix.



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

Laboratory Results For MAPEP-19-XrM40

(AFOH01) USAFSAM/OEA

2510 Fifth Street, Area B

Wright-Patterson AFB, OH 45433-7913

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	0.0227 +/- 0.0020 Bq/sample	-7.7
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.49 +/- 0.03 Bq/sample	-4.3
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.392 +/- 0.029 Bq/sample	-11.3
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.126 +/- 0.013 Bq/sample	-12.5
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.234 +/- 0.030 Bq/sample	-13.0
MAPEP-19-XrM40	Mn-54		-0.004 +/- 0.016 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample	0.0148 +/- 0.0015 Bq/sample	-8.1
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample	0.0103 +/- 0.0012 Bq/sample	-10.4
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	0.156 +/- 0.014 Bq/sample	23.8
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	0.0028 +/- 0.0007 Bq/sample	73.9
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.0141 +/- 0.0016 Bq/sample	15.6
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample	0.048 +/- 0.015 Bq/sample	39.1

Radiological Reference Date: February 1, 2019



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Laboratory Results For MAPEP-19-XrM40

(DINL99) Departamento Ingeniería Nuclear y Mecánica de Fluidos

Escuela de Ingeniería de Bilbao

Bilbao, Vizcaya 48013

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	4.68E-02 +/- 2.10E-03	90.2
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	5.46E-01 +/- 2.96E-02	6.6
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	4.68E-01 +/- 2.57E-02	5.9
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	1.42E-01 +/- 9.71E-03	-1.4
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	2.90E-01 +/- 1.63E-02	7.8
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample	3.27E-02 +/- 1.60E-03	103.1
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample	2.30E-02 +/- 1.23E-03	100.0
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	7.73E00 +/- 2.13E00 Bq/sample	6034.9
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	2.88E-03 +/- 4.09E-04	78.9
MAPEP-19-XrM40	U-235		5.95E-04 +/- 2.02E-04	
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	2.32E-02 +/- 1.41E-03	90.2
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample	8.25E-02 +/- 1.09E-02	139.1

Radiological Reference Date: February 1, 2019



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Laboratory Results For MAPEP-19-XrM40

(EULC01) EnergySolutions, LLC

I-80, Exit 49

Clive, UT 84029

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	.319 +/- .029 Bq/sample	-37.7
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	.278 +/- .041 Bq/sample	-37.1
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	.171 +/- .019 Bq/sample	-36.4
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

Radiological Reference Date: February 1, 2019



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Laboratory Results For MAPEP-19-XrM40

(FDHE01) Florida Dept of Health Environmental Laboratory

PO Box 680069

Orlando, FL 32868-0069

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.43 +/- 0.01 Bq/sample	-16.0
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.51 +/- 0.02 Bq/sample	15.4
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.16 +/- 0.01 Bq/sample	11.1
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.26 +/- 0.01 Bq/sample	-3.3
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	0.123 +/- 0.032 Bq/sample	-2.4
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	0.002 +/- 0.0006 Bq/sample	24.2
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.0119 +/- 0.0015 Bq/sample	-2.5
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

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Laboratory Results For MAPEP-19-XrM40

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

PO Box 680069

Orlando, FL 32868-0069

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.42 +/- 0.01 Bq/sample	-18.0
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.49 +/- 0.01 Bq/sample	10.9
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.15 +/- 0.01 Bq/sample	4.2
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.29 +/- 0.01 Bq/sample	7.8
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

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Laboratory Results For MAPEP-19-XrM40
 (FMEC99) Foods and Water Laboratories Center
 Ministry of Regional Municipalities and Water Resources
 Muscat, seeb 111

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Ce-143		0.32 +/- 0.03 Bq/sample	
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample		
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.33 +/- 0.02 Bq/sample	-25.3
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.09 +/- 0.01 Bq/sample	-37.5
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.19 +/- 0.02 Bq/sample	-29.4
MAPEP-19-XrM40	I-131		53.8 +/- 20.0 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.43 +/- 0.05 Bq/sample	3424.6
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

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Laboratory Results For MAPEP-19-XrM40

(GENE01) GEL Laboratories, LLC

2040 Savage Road

Charleston, SC 29407

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.502 +/- 0.0385 Bq/sample	-2.0
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.529 +/- 0.0370 Bq/sample	19.7
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.187 +/- 0.0132 Bq/sample	29.9
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.365 +/- 0.0304 Bq/sample	35.7
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

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Laboratory Results For MAPEP-19-XrM40

(HPAC99) PHE, CRCE Glasgow

155 Hardgate Road

Glasgow, Scotland G514LS

Radiological

Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.55 +/- 0.17 Bq/sample	7.4
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.5 +/- 0.17 Bq/sample	13.1
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.169 +/- 0.073 Bq/sample	17.4
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.34 +/- 0.12 Bq/sample	26.4
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

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Laboratory Results For MAPEP-19-XrM40

(LAWR01) LAWRENCE BERKELEY NATIONAL LABORATORY
1 CYCLOTRON RD.
BERKELEY, CA 94720

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.6366 +/- 0.04317 Bq/sample	24.3
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.5637 +/- 0.03684 Bq/sample	27.5
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.2290 +/- .02432 Bq/sample	59.0
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.4523 +/- 0.03957 Bq/sample	68.1
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

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Laboratory Results For MAPEP-19-XrM40

(LDRA99) Laboratori de Radiologia Ambiental-Universitat de Barcelona

Facultat de Química

Barcelona, Catalunya 08028

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	0.025 +/- 0.001 Bq/sample	1.6
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.50 +/- 0.06 Bq/sample	-2.3
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.46 +/- 0.06 Bq/sample	4.1
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.15 +/- 0.02 Bq/sample	4.2
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.26 +/- 0.03 Bq/sample	-3.3
MAPEP-19-XrM40	Mn-54		0.05 +/- 0.05 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample	0.0169 +/- 0.0006 Bq/sample	5.0
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample	0.0108 +/- 0.0005 Bq/sample	-6.1
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	0.139 +/- 0.007 Bq/sample	10.3
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	0.0024 +/- 0.0003 Bq/sample	49.1
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.0109 +/- 0.0006 Bq/sample	-10.7
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample	0.1 +/- 0.1 Bq/sample	189.9

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Laboratory Results For MAPEP-19-XrM40

(MALA99) Alypz Sdn. Bhd.

No. 14, JLN USJ 1/1

Subang Jaya, Selangor 47600

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	0.078 +/- 0.131 Bq/sample	217.1
MAPEP-19-XrM40	Cd-109		0.55 +/- 0.38 Bq/sample	
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.36 +/- 0.02 Bq/sample	-29.7
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.39 +/- 0.03 Bq/sample	-11.8
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.11 +/- 0.02 Bq/sample	-23.6
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.18 +/- 0.02 Bq/sample	-33.1
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	K-40		0.48 +/- 0.54 Bq/sample	
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

Radiological Reference Date: February 1, 2019



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

Laboratory Results For MAPEP-19-XrM40

(NARL01) National Analytical Radiation Environmental Laboratory

540 S. Morris Ave.

Montgomery, AL 36115-2601

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	-0.196 +/- 0.160 Bq/sample	-896.7
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.594 +/- 0.0434 Bq/sample	16.0
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.521 +/- 0.0605 Bq/sample	17.9
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.208 +/- 0.0447 Bq/sample	44.4
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.397 +/- 0.0419 Bq/sample	47.6
MAPEP-19-XrM40	Mn-54		0.0156 +/- 0.0419 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample	0.0169 +/- 0.00150 Bq/sample	5.0
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample	0.0133 +/- 0.00127 Bq/sample	15.7
MAPEP-19-XrM40	K-40		55.3 +/- 3.15 Bq/sample	
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	0.117 +/- 0.0164 Bq/sample	-7.1
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	0.00242 +/- 0.000471	50.3
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.0125 +/- 0.00111 Bq/sample	2.5
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample	0.0227 +/- 0.0877 Bq/sample	-34.2

Radiological Reference Date: February 1, 2019



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

Laboratory Results For MAPEP-19-XrM40

(NARL02) USEPA - NAREL - MERL

540 S Morris Ave

Montgomery, AL 36115

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.563 +/- 0.0380 Bq/sample	10.0
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.490 +/- 0.0450 Bq/sample	10.9
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.179 +/- 0.0320 Bq/sample	24.3
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.336 +/- 0.0270 Bq/sample	24.9
MAPEP-19-XrM40	Mn-54		0.00808 +/- 0.0150 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample	0.0333 +/- 0.0190 Bq/sample	-3.5

Radiological Reference Date: February 1, 2019



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

Laboratory Results For MAPEP-19-XrM40
 (NOCS99) National Oceanography Centre, Southampton
 GAU-Radioanalytical
 Southampton, Hampshire SO14 3ZH

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	0.023 +/- 0.003 Bq/sample	-6.5
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.13 +/- 0.03 Bq/sample	-74.6
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.10 +/- 0.02 Bq/sample	-77.4
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.13 +/- 0.01 Bq/sample	-9.7
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.27 +/- 0.02 Bq/sample	0.4
MAPEP-19-XrM40	Fe-55		0.2 +/- 0.2 Bq/sample	
MAPEP-19-XrM40	Mn-54		0.4 +/- 0.4 Bq/sample	
MAPEP-19-XrM40	Ni-63		0.1 +/- 0.1 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample	0.015 +/- 0.002 Bq/sample	-6.8
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample	0.011 +/- 0.001 Bq/sample	-4.3
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	0.10 +/- 0.05 Bq/sample	-20.6
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	0.0026 +/- 0.0007 Bq/sample	61.5
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.012 +/- 0.001 Bq/sample	-1.6
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample	1 +/- 1 Bq/sample	2798.6

Radiological Reference Date: February 1, 2019



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

Laboratory Results For MAPEP-19-XrM40
 (ODHL01) Ohio Department of Health Laboratory
 8995 E Main Street
 Reynoldsburg, OH 43068

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.524 +/- 0.0260 Bq/sample	2.3
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.471 +/- 0.0351 Bq/sample	6.6
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.154 +/- 0.0214 Bq/sample	6.9
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.286 +/- 0.0175 Bq/sample	6.3
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

Radiological Reference Date: February 1, 2019



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

Laboratory Results For MAPEP-19-XrM40

(RAVR99) Radiactividad Ambiental y Vigilancia Radiologica

CIEMAT (Ed 70 P2 D11)

Madrid, Madrid 28040

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	0.0240 +/- 0.0014 Bq/sample	-2.4
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.493 +/- 0.034 Bq/sample	-3.7
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.433 +/- 0.029 Bq/sample	-2.0
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.168 +/- 0.014 Bq/sample	16.7
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.248 +/- 0.010 Bq/sample	-7.8
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample	0.0156 +/- 0.0010 Bq/sample	-3.1
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample	0.01064 +/- 0.00088 Bq/sample	-7.5
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	0.102 +/- 0.004 Bq/sample	-19.0
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	0.0072 +/- 0.0031 Bq/sample	347.2
MAPEP-19-XrM40	U-235		0.0013 +/- 0.0012 Bq/sample	
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.01612 +/- 0.0039 Bq/sample	32.1
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

Radiological Reference Date: February 1, 2019



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

Laboratory Results For MAPEP-19-XrM40
 (SEML01) SRS Environmental Monitoring Laboratory
 Bldg 735-B
 Aiken, SC 29808

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample	0.021 +/- 0.0017 Bq/sample	-14.6
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.53 +/- 0.09 Bq/sample	3.5
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.48 +/- 0.11 Bq/sample	8.6
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	1.326 +/- 0.64 Bq/sample	820.8
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.29 +/- 0.07 Bq/sample	7.8
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample	0.0139 +/- 0.0011 Bq/sample	-13.7
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample	0.011 +/- 0.00088 Bq/sample	-4.3
MAPEP-19-XrM40	K-40		11.37 +/- 2.18 Bq/sample	
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample	0.103 +/- 0.017 Bq/sample	-18.3
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample	0.0021 +/- 0.00017 Bq/sample	30.4
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample	0.0113 +/- 0.00091 Bq/sample	-7.4
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

Radiological Reference Date: February 1, 2019



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

Laboratory Results For MAPEP-19-XrM40

(SRPD01) Sandia National Laboratories, Radiation Protection Sample Diagnostics

PO Box 5800, MS1103

Albuquerque, NM 87185-1103

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.290 +/- 0.053 Bq/sample	-43.4
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.219 +/- 0.036 Bq/sample	-50.5
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.128 +/- 0.021 Bq/sample	-11.1
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.110 +/- 0.037 Bq/sample	-59.1
MAPEP-19-XrM40	Mn-54		0.0130 +/- 0.0350 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample	0.138 +/- 0.067 Bq/sample	300.0

Radiological Reference Date: February 1, 2019



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

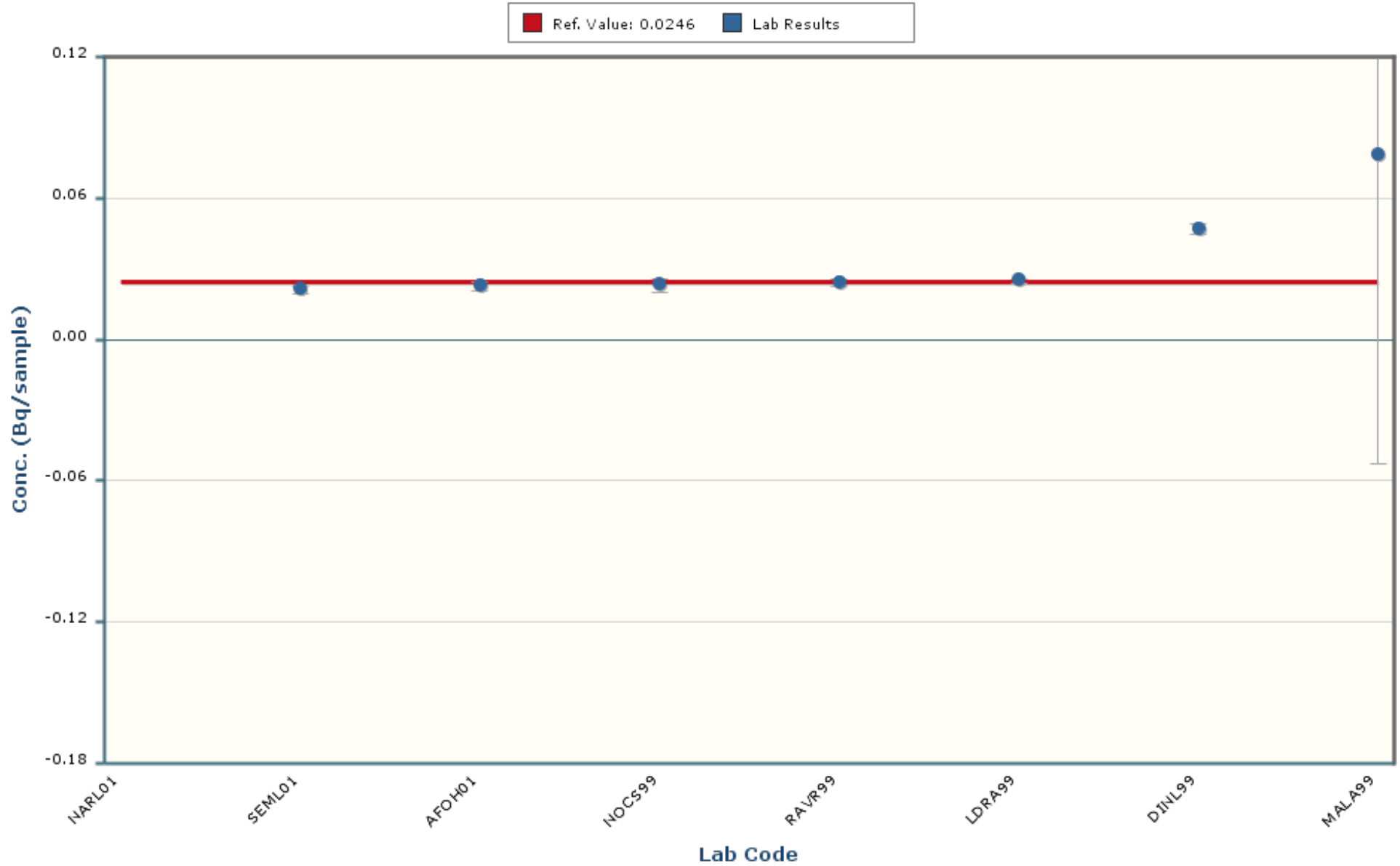
Laboratory Results For MAPEP-19-XrM40
 (TELE02) ATI Environmental, Inc., Midwest Lab
 700 Landwehr Road
 Northbrook, IL 60062-

Radiological				
Sample ID	Nuclide	Known Activity	Experimental Activity	Bias (%)
MAPEP-19-XrM40	Am-241	0.0246 +/- 0.0006 Bq/sample		
MAPEP-19-XrM40	Cs-134	0.512 +/- 0.014 Bq/sample	0.415 +/- 0.034 Bq/sample	-18.9
MAPEP-19-XrM40	Cs-137	0.442 +/- 0.011 Bq/sample	0.475 +/- 0.052 Bq/sample	7.5
MAPEP-19-XrM40	Co-57	0.144 +/- 0.004 Bq/sample	0.166 +/- 0.035 Bq/sample	15.3
MAPEP-19-XrM40	Co-58		0.010 +/- 0.016 Bq/sample	
MAPEP-19-XrM40	Co-60	0.269 +/- 0.008 Bq/sample	0.273 +/- 0.036 Bq/sample	1.5
MAPEP-19-XrM40	Mn-54		0.008 +/- 0.018 Bq/sample	
MAPEP-19-XrM40	Pu-238	0.0161 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Pu-239	0.0115 +/- 0.0003 Bq/sample		
MAPEP-19-XrM40	Sr-90	0.126 +/- 0.004 Bq/sample		
MAPEP-19-XrM40	Tc-99	0.307 +/- 0.009 Bq/sample		
MAPEP-19-XrM40	U-234	0.00161 +/- 0.00005 Bq/sample		
MAPEP-19-XrM40	U-238	0.0122 +/- 0.0004 Bq/sample		
MAPEP-19-XrM40	Zn-65	0.0345 +/- 0.0010 Bq/sample		

Radiological Reference Date: February 1, 2019

Americium-241

MAPEP-19-XrM40

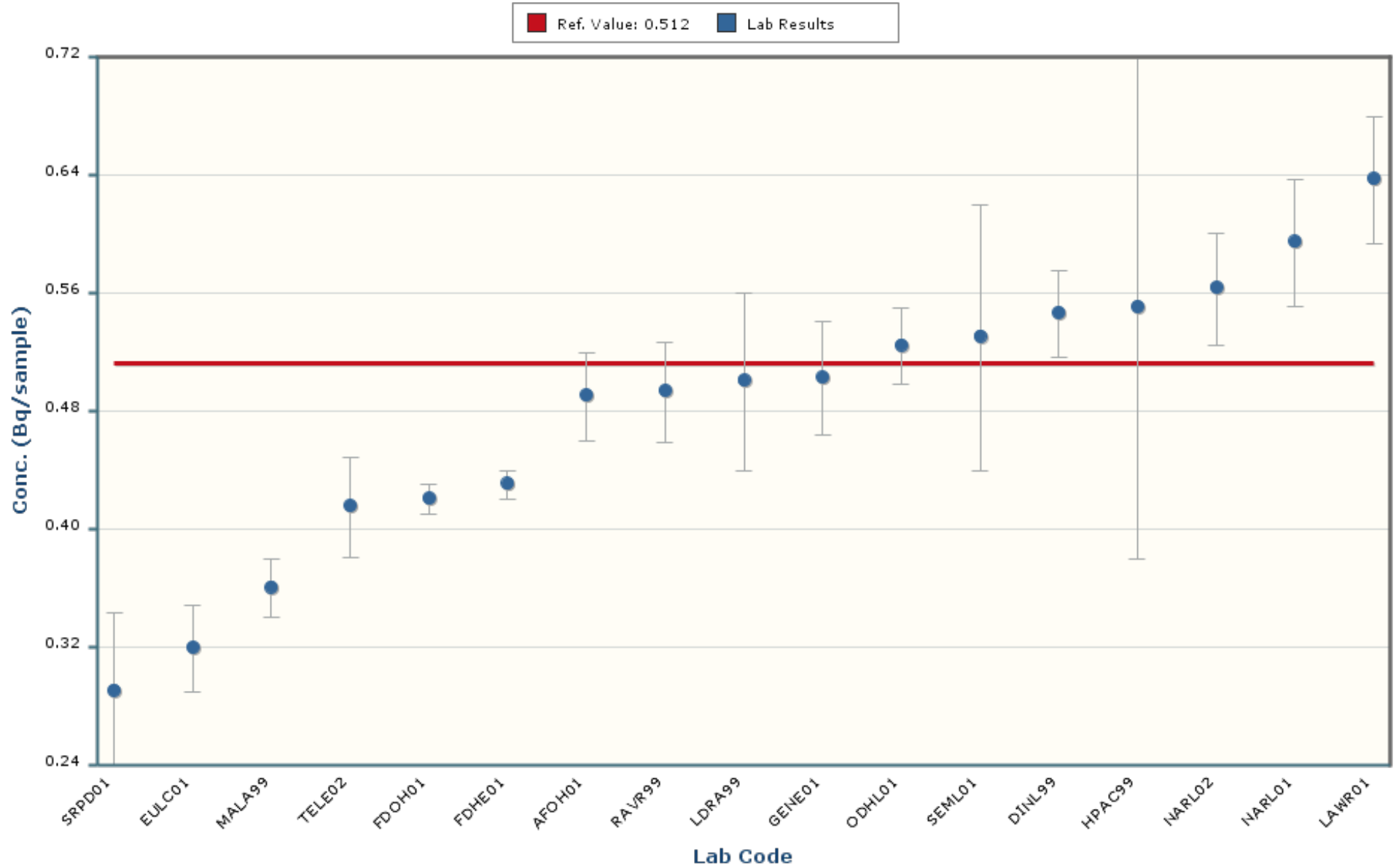


Notes:

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

Cesium-134

MAPEP-19-XrM40

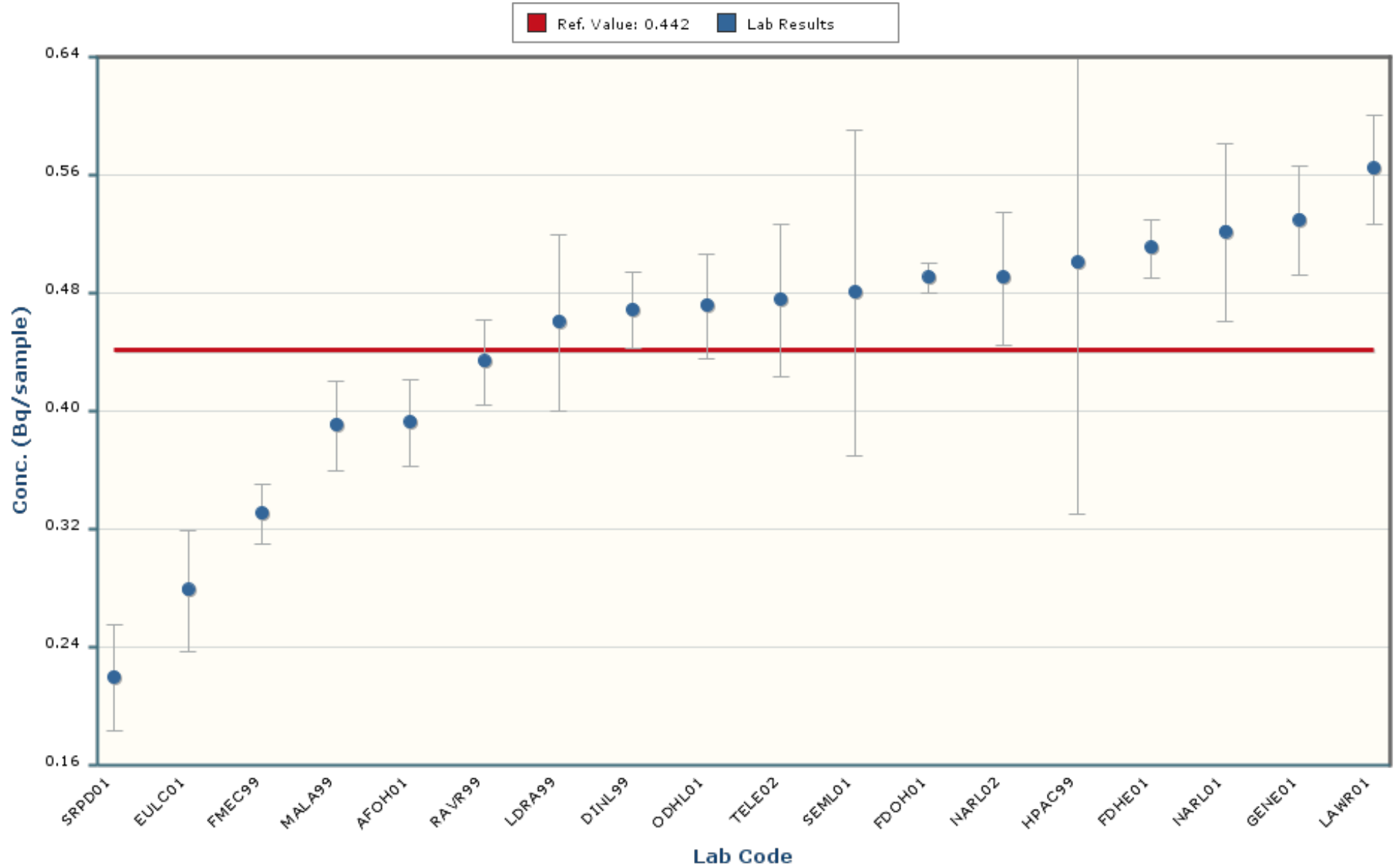


Notes:

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

Cesium-137

MAPEP-19-XrM40

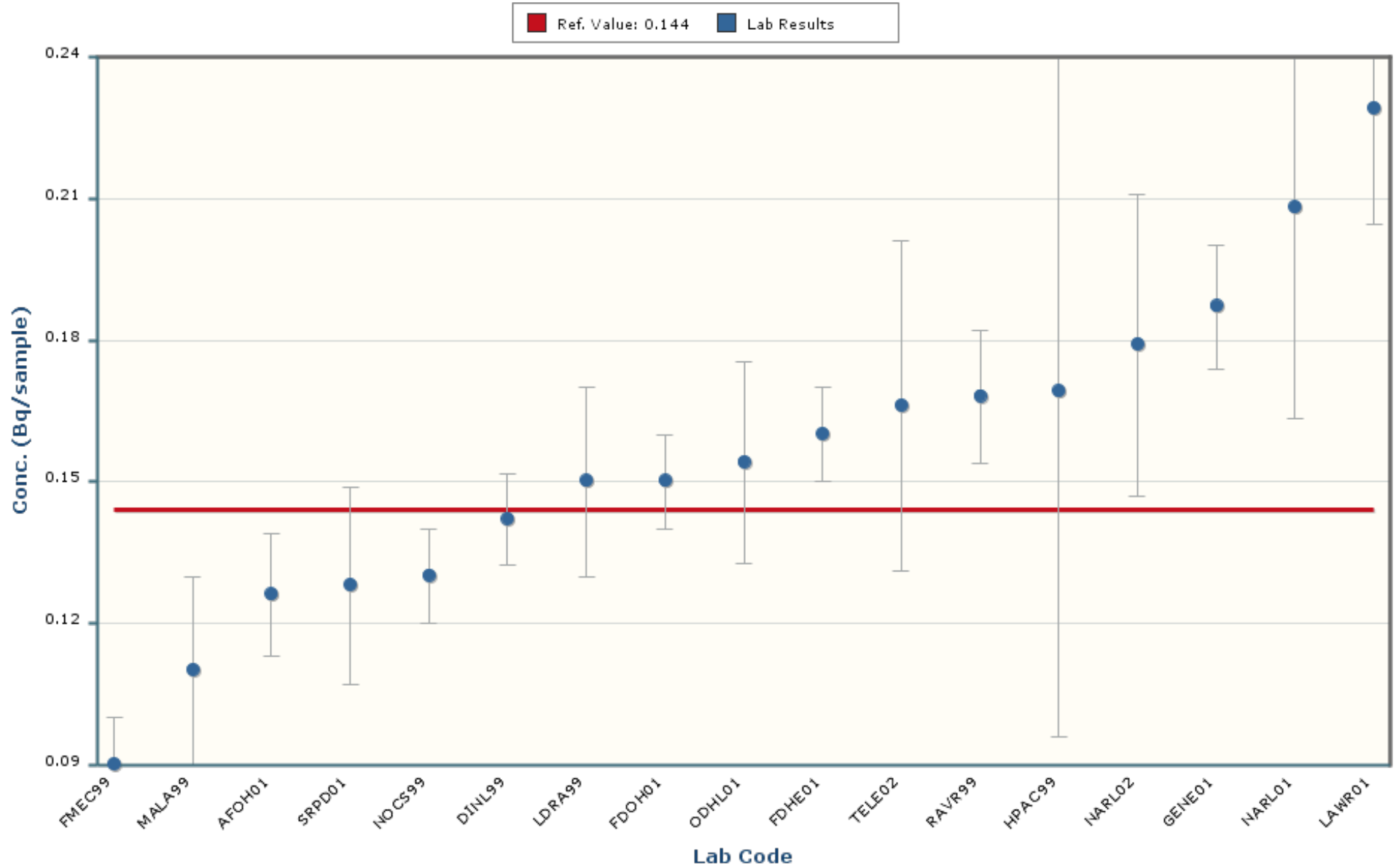


Notes:

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

Cobalt-57

MAPEP-19-XrM40

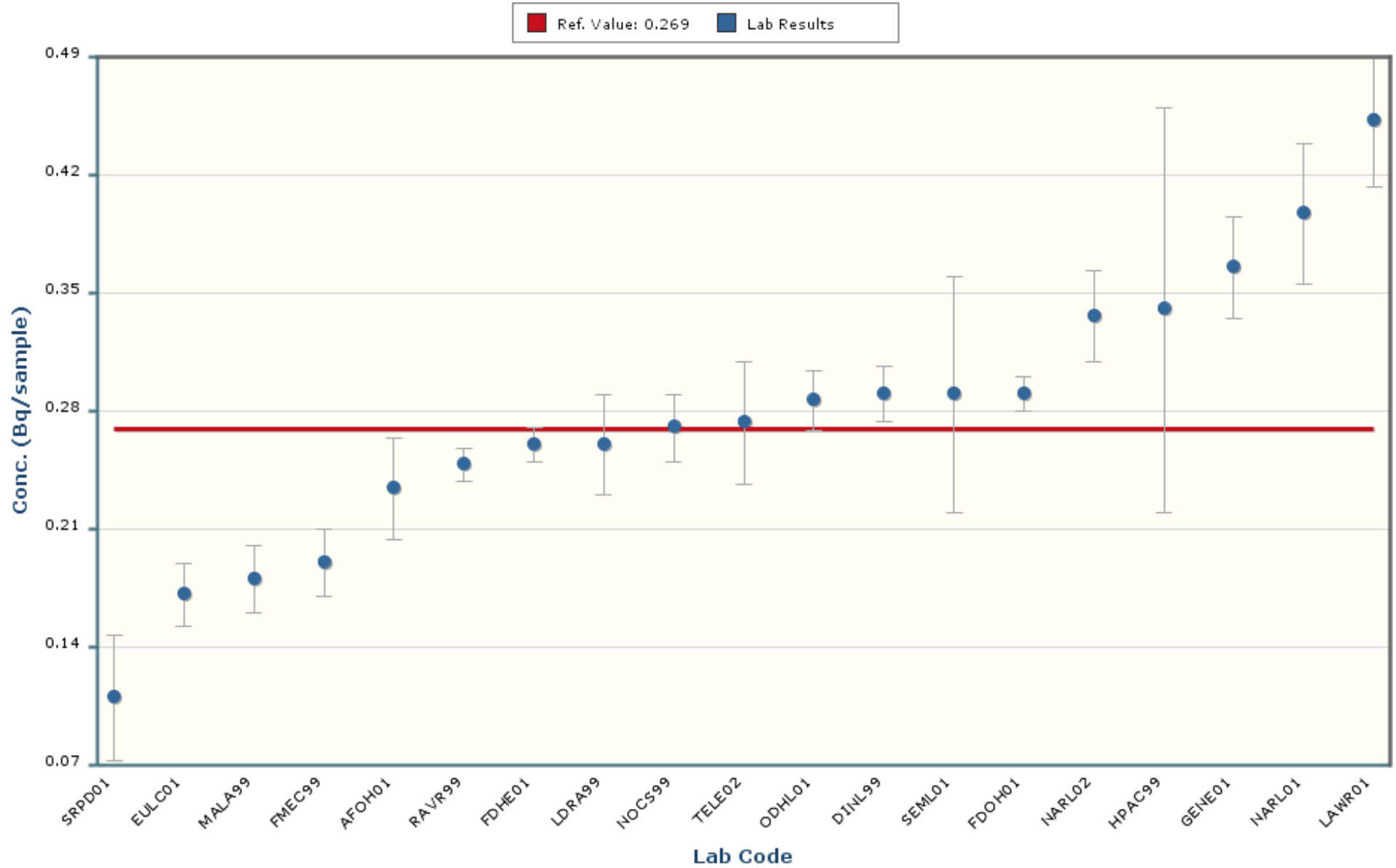


Notes:

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

Cobalt-60

MAPEP-19-XrM40

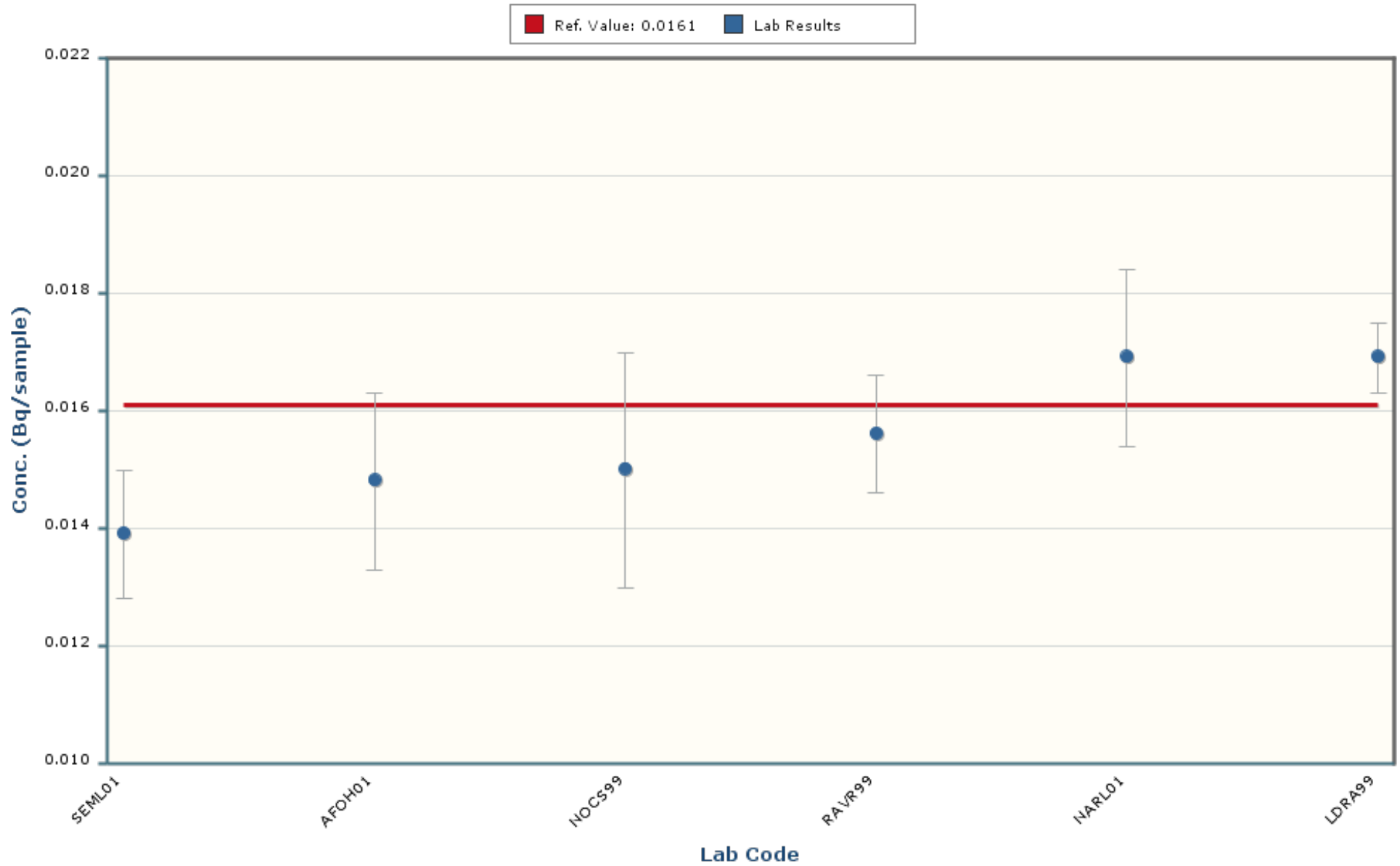


Notes:

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

Plutonium-238

MAPEP-19-XrM40

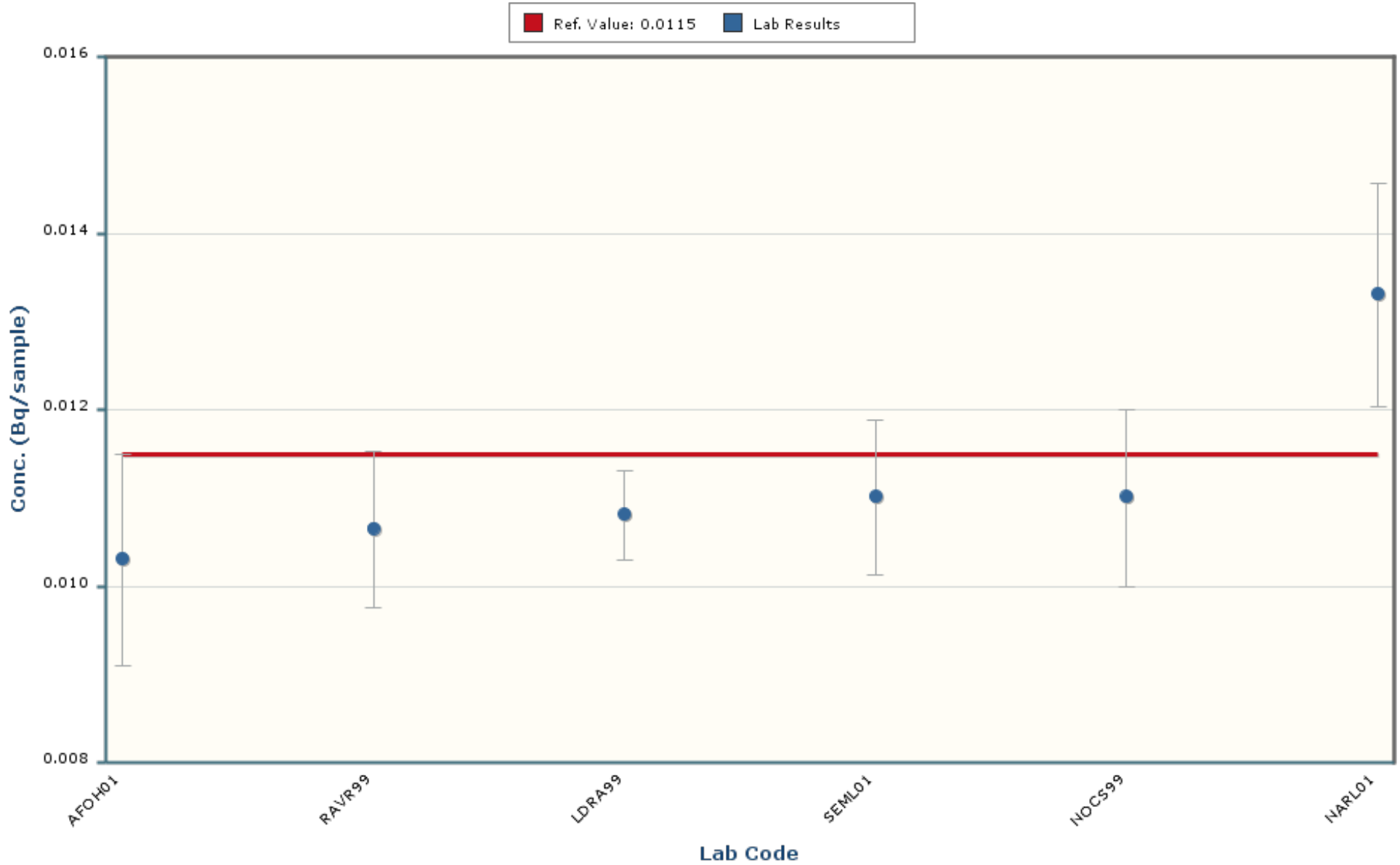


Notes:

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

Plutonium-239/240

MAPEP-19-XrM40

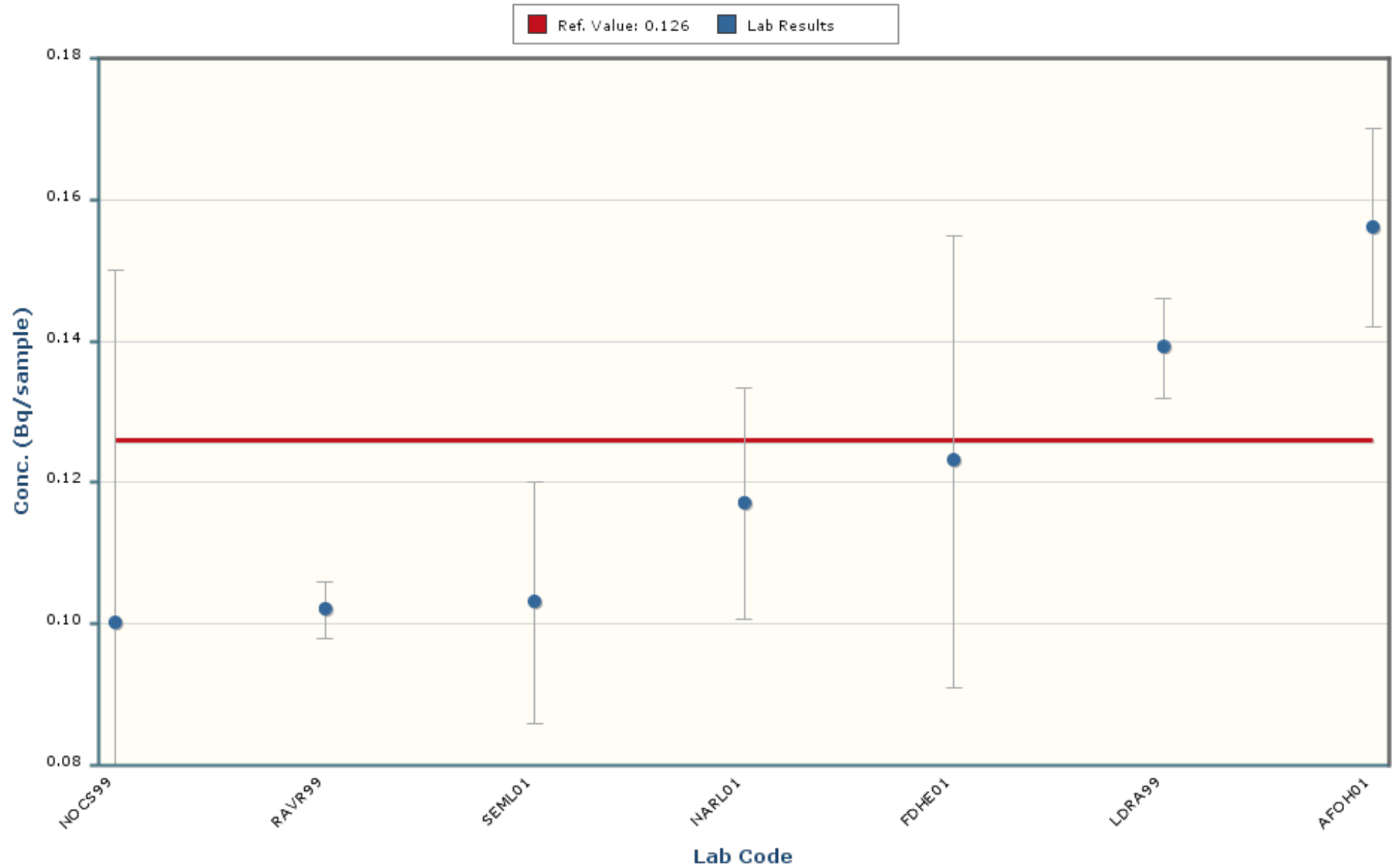


Notes:

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

Strontium-90

MAPEP-19-XrM40

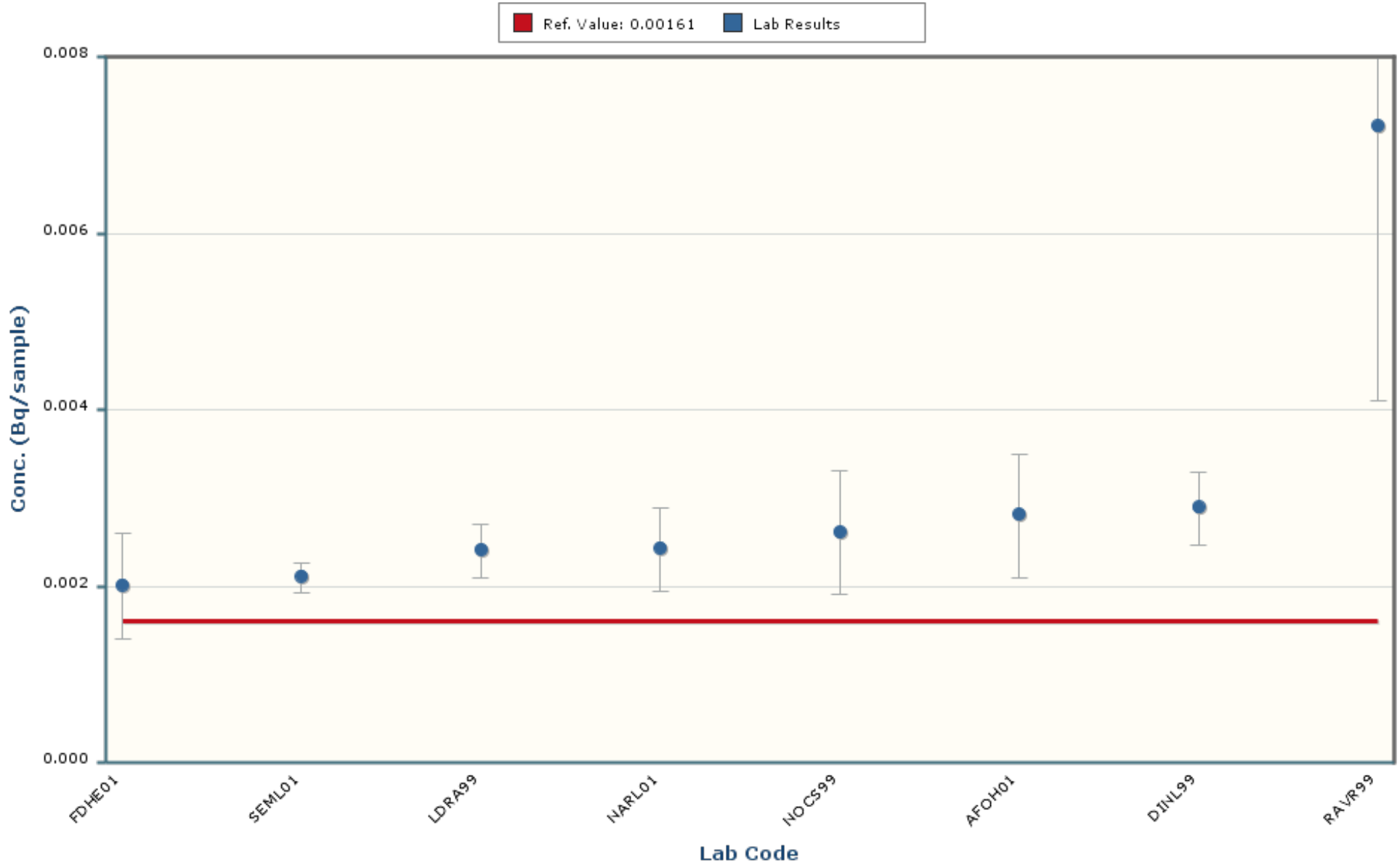


Notes:

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

Uranium-234

MAPEP-19-XrM40

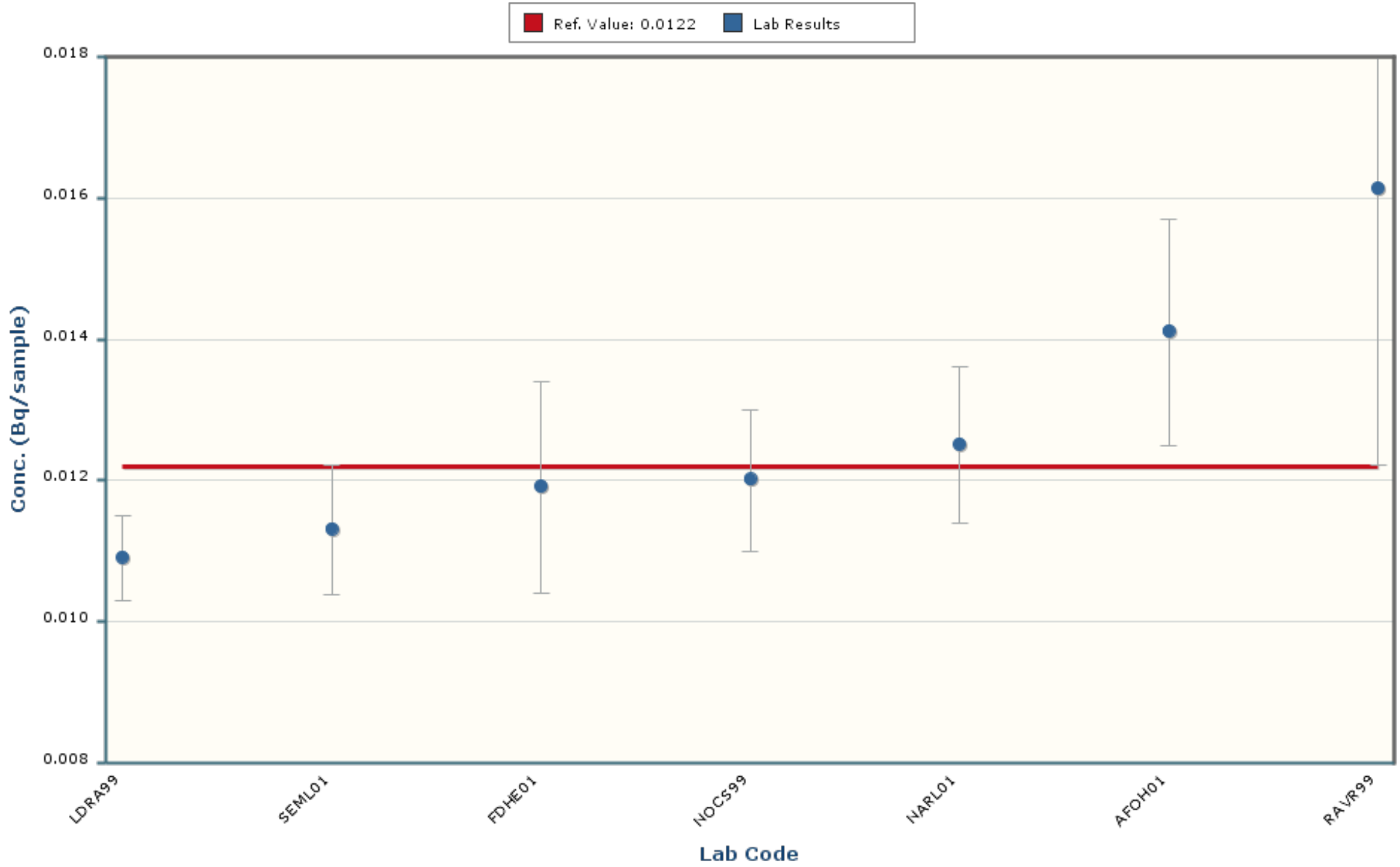


Notes:

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

Uranium-238

MAPEP-19-XrM40

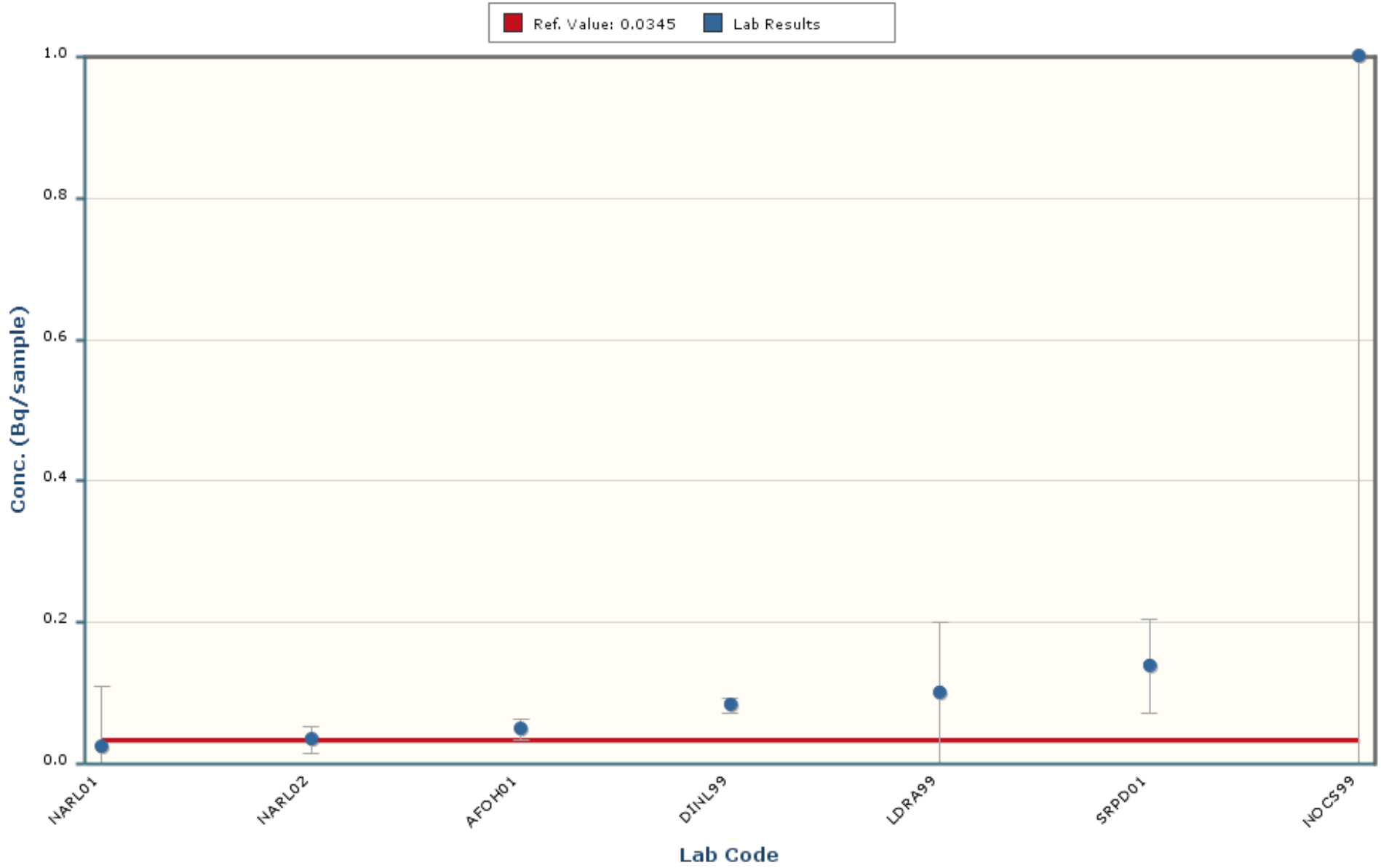


Notes:

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

Zinc-65

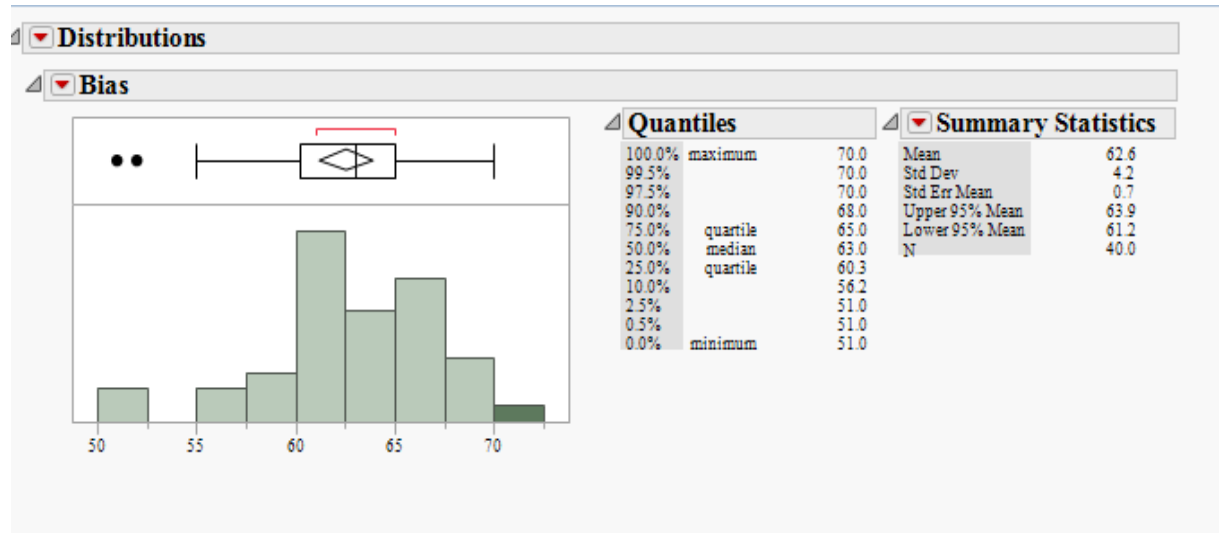
MAPEP-19-XrM40



Notes:

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.

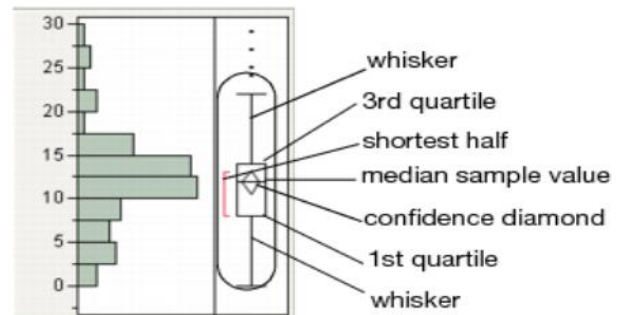


Outlier Box Plot

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)

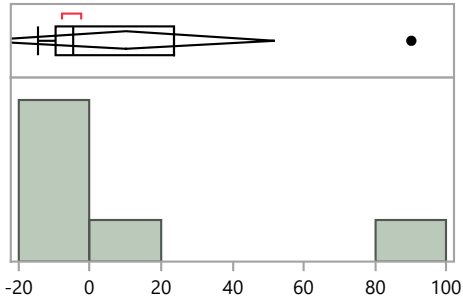


If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

XrM Distribution by Detection Method

Distributions Analyte_Detection=Americium-241 Alpha Spectrometry

Bias

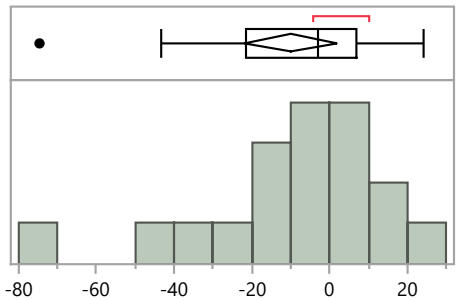


Quantiles		
100.0%	maximum	90.2
99.5%		90.2
97.5%		90.2
90.0%		90.2
75.0%	quartile	23.8
50.0%	median	-4.5
25.0%	quartile	-9.4
10.0%		-14.6
2.5%		-14.6
0.5%		-14.6
0.0%	minimum	-14.6

Summary Statistics	
Mean	10.1
Std Dev	39.6
Std Err Mean	16.2
Upper 95% Mean	51.7
Lower 95% Mean	-31.5
N	6.0

Distributions Analyte_Detection=Cesium-134 Gamma Spectrometry

Bias

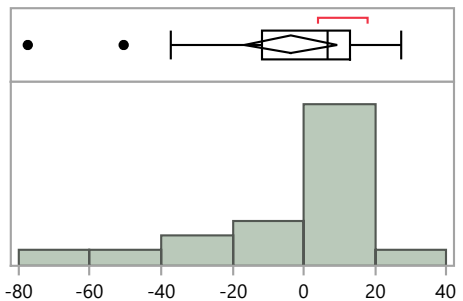


Quantiles		
100.0%	maximum	24.3
99.5%		24.3
97.5%		24.3
90.0%		16.8
75.0%	quartile	6.8
50.0%	median	-3.0
25.0%	quartile	-21.6
10.0%		-46.5
2.5%		-74.6
0.5%		-74.6
0.0%	minimum	-74.6

Summary Statistics	
Mean	-10.0
Std Dev	24.2
Std Err Mean	5.7
Upper 95% Mean	2.0
Lower 95% Mean	-22.1
N	18.0

Distributions Analyte_Detection=Cesium-137 Gamma Spectrometry

Bias



Quantiles		
100.0%	maximum	27.5
99.5%		27.5
97.5%		27.5
90.0%		19.7
75.0%	quartile	13.1
50.0%	median	6.6
25.0%	quartile	-11.8
10.0%		-50.5
2.5%		-77.4
0.5%		-77.4
0.0%	minimum	-77.4

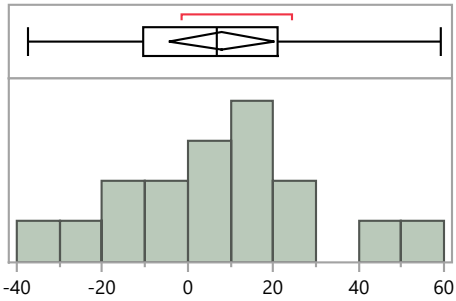
Summary Statistics	
Mean	-3.5
Std Dev	26.8
Std Err Mean	6.1
Upper 95% Mean	9.4
Lower 95% Mean	-16.5
N	19.0

XrM40 Distribution by Detection Method

XrM Distribution by Detection Method

Distributions Analyte_Detection=Cobalt-57 Gamma Spectrometry

Bias



Quantiles

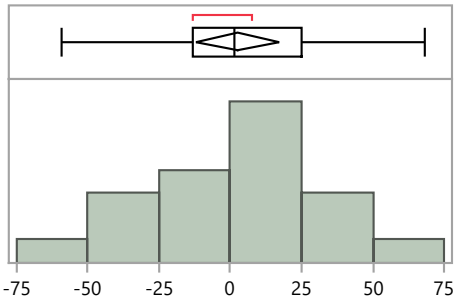
100.0%	maximum	59.0
99.5%		59.0
97.5%		59.0
90.0%		47.3
75.0%	quartile	20.9
50.0%	median	6.9
25.0%	quartile	-10.4
10.0%		-26.4
2.5%		-37.5
0.5%		-37.5
0.0%	minimum	-37.5

Summary Statistics

Mean	8.1
Std Dev	24.0
Std Err Mean	5.8
Upper 95% Mean	20.4
Lower 95% Mean	-4.2
N	17.0

Distributions Analyte_Detection=Cobalt-60 Gamma Spectrometry

Bias



Quantiles

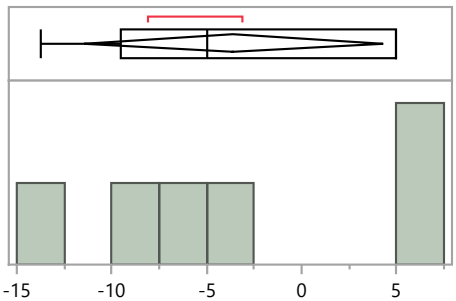
100.0%	maximum	68.1
99.5%		68.1
97.5%		68.1
90.0%		47.6
75.0%	quartile	24.9
50.0%	median	1.5
25.0%	quartile	-13.0
10.0%		-36.4
2.5%		-59.1
0.5%		-59.1
0.0%	minimum	-59.1

Summary Statistics

Mean	2.6
Std Dev	30.4
Std Err Mean	7.0
Upper 95% Mean	17.2
Lower 95% Mean	-12.1
N	19.0

Distributions Analyte_Detection=Plutonium-238 Alpha Spectrometry

Bias



Quantiles

100.0%	maximum	5.0
99.5%		5.0
97.5%		5.0
90.0%		5.0
75.0%	quartile	5.0
50.0%	median	-5.0
25.0%	quartile	-9.5
10.0%		-13.7
2.5%		-13.7
0.5%		-13.7
0.0%	minimum	-13.7

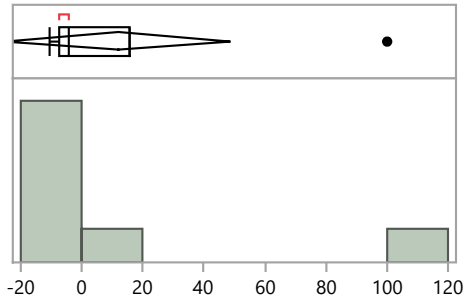
Summary Statistics

Mean	-3.6
Std Dev	7.5
Std Err Mean	3.1
Upper 95% Mean	4.2
Lower 95% Mean	-11.5
N	6.0

XrM Distribution by Detection Method

Distributions Analyte_Detection=Plutonium-239/240 Alpha Spectrometry

Bias

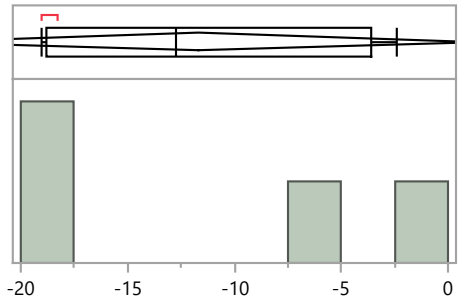


Quantiles		
100.0%	maximum	100.0
99.5%		100.0
97.5%		100.0
90.0%		100.0
75.0%	quartile	15.7
50.0%	median	-4.3
25.0%	quartile	-7.5
10.0%		-10.4
2.5%		-10.4
0.5%		-10.4
0.0%	minimum	-10.4

Summary Statistics	
Mean	11.9
Std Dev	39.8
Std Err Mean	15.0
Upper 95% Mean	48.7
Lower 95% Mean	-24.9
N	7.0

Distributions Analyte_Detection=Strontium-90 Beta Counting - 2 pi gas flow proportional counter

Bias

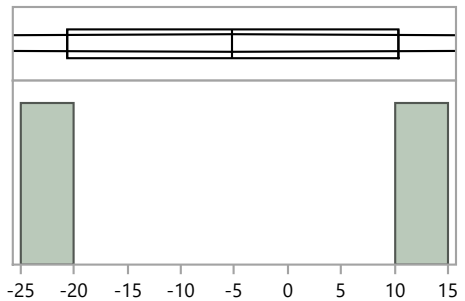


Quantiles		
100.0%	maximum	-2.4
99.5%		-2.4
97.5%		-2.4
90.0%		-2.4
75.0%	quartile	-3.6
50.0%	median	-12.7
25.0%	quartile	-18.8
10.0%		-19.0
2.5%		-19.0
0.5%		-19.0
0.0%	minimum	-19.0

Summary Statistics	
Mean	-11.7
Std Dev	8.3
Std Err Mean	4.1
Upper 95% Mean	1.4
Lower 95% Mean	-24.8
N	4.0

Distributions Analyte_Detection=Strontium-90 Beta Counting - liquid scintillation counter

Bias



Quantiles		
100.0%	maximum	10.3
99.5%		10.3
97.5%		10.3
90.0%		10.3
75.0%	quartile	10.3
50.0%	median	-5.2
25.0%	quartile	-20.6
10.0%		-20.6
2.5%		-20.6
0.5%		-20.6
0.0%	minimum	-20.6

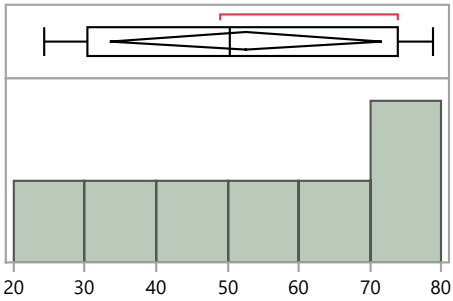
Summary Statistics	
Mean	-5.2
Std Dev	21.8
Std Err Mean	15.5
Upper 95% Mean	191.2
Lower 95% Mean	-201.5
N	2.0

XrM40 Distribution by Detection Method

XrM Distribution by Detection Method

Distributions Analyte_Detection=Uranium-234 Alpha Spectrometry

Bias



Quantiles

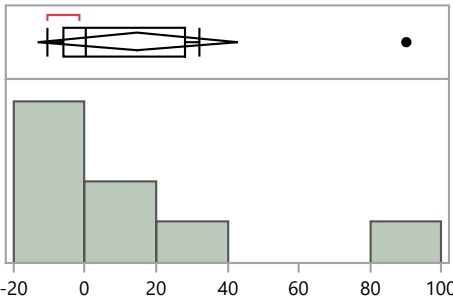
100.0%	maximum	78.9
99.5%		78.9
97.5%		78.9
90.0%		78.9
75.0%	quartile	73.9
50.0%	median	50.3
25.0%	quartile	30.4
10.0%		24.2
2.5%		24.2
0.5%		24.2
0.0%	minimum	24.2

Summary Statistics

Mean	52.6
Std Dev	20.6
Std Err Mean	7.8
Upper 95% Mean	71.6
Lower 95% Mean	33.6
N	7.0

Distributions Analyte_Detection=Uranium-238 Alpha Spectrometry

Bias



Quantiles

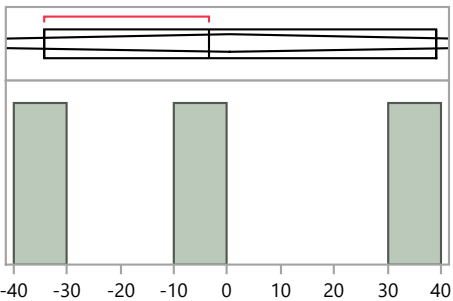
100.0%	maximum	90.2
99.5%		90.2
97.5%		90.2
90.0%		90.2
75.0%	quartile	28.0
50.0%	median	0.5
25.0%	quartile	-6.2
10.0%		-10.7
2.5%		-10.7
0.5%		-10.7
0.0%	minimum	-10.7

Summary Statistics

Mean	14.8
Std Dev	33.5
Std Err Mean	11.8
Upper 95% Mean	42.8
Lower 95% Mean	-13.2
N	8.0

Distributions Analyte_Detection=Zinc-65 Gamma Spectrometry

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	-3.5
25.0%	quartile	-34.2
10.0%		-34.2
2.5%		-34.2
0.5%		-34.2
0.0%	minimum	-34.2

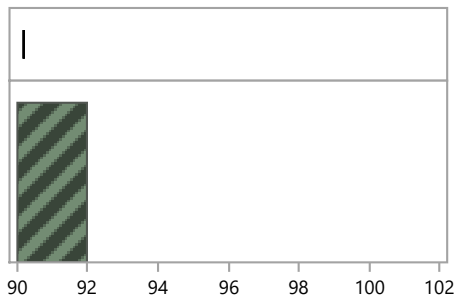
Summary Statistics

Mean	0.5
Std Dev	36.8
Std Err Mean	21.3
Upper 95% Mean	91.9
Lower 95% Mean	-91.0
N	3.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Americium-241 Acid dissolution by strong Aqua Regia, hydrofluoric acid, etc.

Bias



Quantiles

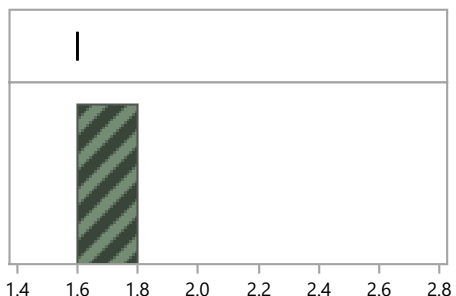
100.0%	maximum	90.2
99.5%		90.2
97.5%		90.2
90.0%		90.2
75.0%	quartile	90.2
50.0%	median	90.2
25.0%	quartile	90.2
10.0%		90.2
2.5%		90.2
0.5%		90.2
0.0%	minimum	90.2

Summary Statistics

Mean	90.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Americium-241 Acid leaching without hydrofluoric acid

Bias



Quantiles

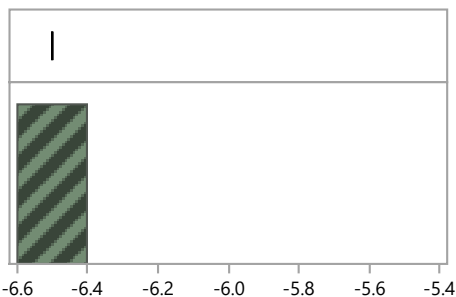
100.0%	maximum	1.6
99.5%		1.6
97.5%		1.6
90.0%		1.6
75.0%	quartile	1.6
50.0%	median	1.6
25.0%	quartile	1.6
10.0%		1.6
2.5%		1.6
0.5%		1.6
0.0%	minimum	1.6

Summary Statistics

Mean	1.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Americium-241 Other

Bias



Quantiles

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

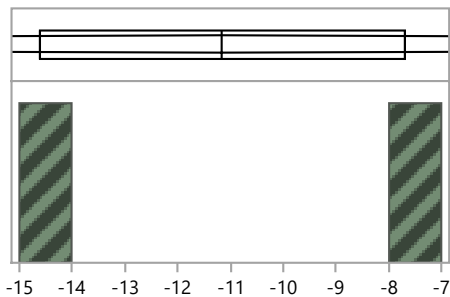
Summary Statistics

Mean	-6.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Americium-241 Total dissolution by fusion

Bias



Quantiles

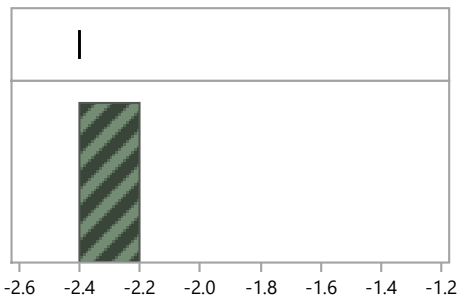
100.0%	maximum	-7.7
99.5%		-7.7
97.5%		-7.7
90.0%		-7.7
75.0%	quartile	-7.7
50.0%	median	-11.2
25.0%	quartile	-14.6
10.0%		-14.6
2.5%		-14.6
0.5%		-14.6
0.0%	minimum	-14.6

Summary Statistics

Mean	-11.2
Std Dev	4.9
Std Err Mean	3.5
Upper 95% Mean	32.7
Lower 95% Mean	-55.0
N	2.0

Distributions Analyte_Method=Americium-241 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

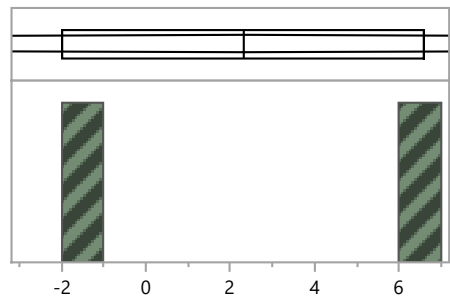
100.0%	maximum	-2.4
99.5%		-2.4
97.5%		-2.4
90.0%		-2.4
75.0%	quartile	-2.4
50.0%	median	-2.4
25.0%	quartile	-2.4
10.0%		-2.4
2.5%		-2.4
0.5%		-2.4
0.0%	minimum	-2.4

Summary Statistics

Mean	-2.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-134 Acid dissolution by strong Aqua Regia, hydrofluoric acid, etc.

Bias



Quantiles

100.0%	maximum	6.6
99.5%		6.6
97.5%		6.6
90.0%		6.6
75.0%	quartile	6.6
50.0%	median	2.3
25.0%	quartile	-2.0
10.0%		-2.0
2.5%		-2.0
0.5%		-2.0
0.0%	minimum	-2.0

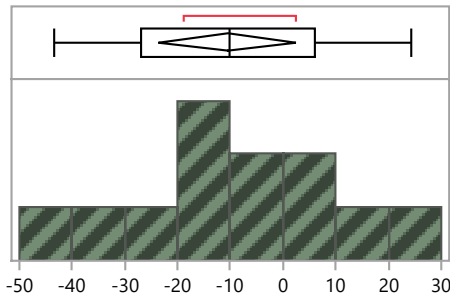
Summary Statistics

Mean	2.3
Std Dev	6.1
Std Err Mean	4.3
Upper 95% Mean	56.9
Lower 95% Mean	-52.3
N	2.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Cesium-134 No preparation - analyzed as received

Bias



Quantiles

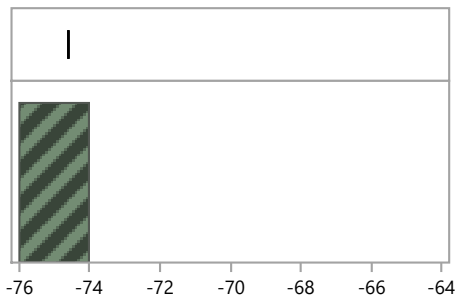
100.0%	maximum	24.3
99.5%		24.3
97.5%		24.3
90.0%		20.0
75.0%	quartile	6.1
50.0%	median	-10.2
25.0%	quartile	-27.0
10.0%		-41.7
2.5%		-43.4
0.5%		-43.4
0.0%	minimum	-43.4

Summary Statistics

Mean	-10.5
Std Dev	20.4
Std Err Mean	5.9
Upper 95% Mean	2.4
Lower 95% Mean	-23.5
N	12.0

Distributions Analyte_Method=Cesium-134 Other

Bias



Quantiles

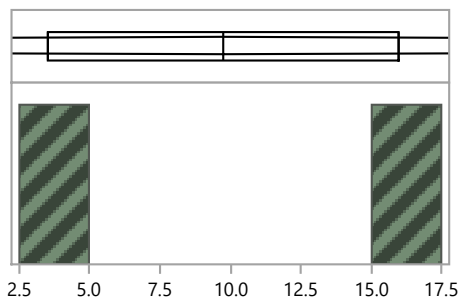
100.0%	maximum	-74.6
99.5%		-74.6
97.5%		-74.6
90.0%		-74.6
75.0%	quartile	-74.6
50.0%	median	-74.6
25.0%	quartile	-74.6
10.0%		-74.6
2.5%		-74.6
0.5%		-74.6
0.0%	minimum	-74.6

Summary Statistics

Mean	-74.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-134 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	16.0
99.5%		16.0
97.5%		16.0
90.0%		16.0
75.0%	quartile	16.0
50.0%	median	9.8
25.0%	quartile	3.5
10.0%		3.5
2.5%		3.5
0.5%		3.5
0.0%	minimum	3.5

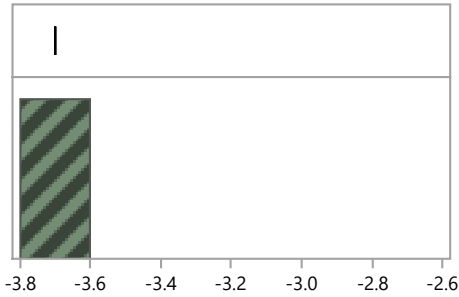
Summary Statistics

Mean	9.8
Std Dev	8.8
Std Err Mean	6.3
Upper 95% Mean	89.2
Lower 95% Mean	-69.7
N	2.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Cesium-134 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

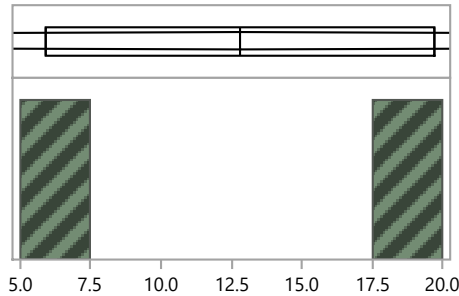
100.0%	maximum	-3.7
99.5%		-3.7
97.5%		-3.7
90.0%		-3.7
75.0%	quartile	-3.7
50.0%	median	-3.7
25.0%	quartile	-3.7
10.0%		-3.7
2.5%		-3.7
0.5%		-3.7
0.0%	minimum	-3.7

Summary Statistics

Mean	-3.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-137 Acid dissolution by strong Aqua Regia, hydrofluoric acid, etc.

Bias



Quantiles

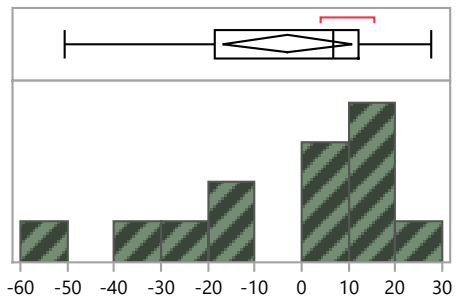
100.0%	maximum	19.7
99.5%		19.7
97.5%		19.7
90.0%		19.7
75.0%	quartile	19.7
50.0%	median	12.8
25.0%	quartile	5.9
10.0%		5.9
2.5%		5.9
0.5%		5.9
0.0%	minimum	5.9

Summary Statistics

Mean	12.8
Std Dev	9.8
Std Err Mean	6.9
Upper 95% Mean	100.5
Lower 95% Mean	-74.9
N	2.0

Distributions Analyte_Method=Cesium-137 No preparation - analyzed as received

Bias



Quantiles

100.0%	maximum	27.5
99.5%		27.5
97.5%		27.5
90.0%		22.7
75.0%	quartile	12.0
50.0%	median	6.6
25.0%	quartile	-18.6
10.0%		-45.1
2.5%		-50.5
0.5%		-50.5
0.0%	minimum	-50.5

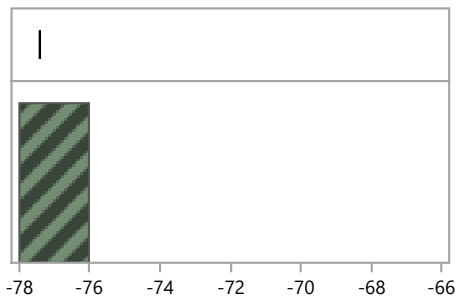
Summary Statistics

Mean	-3.1
Std Dev	22.8
Std Err Mean	6.3
Upper 95% Mean	10.7
Lower 95% Mean	-16.8
N	13.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Cesium-137 Other

Bias



Quantiles

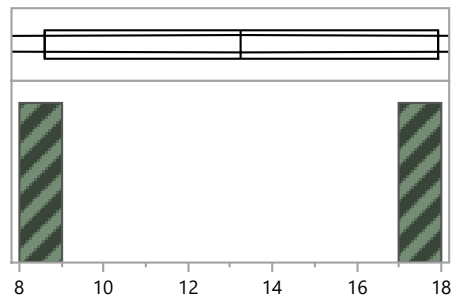
100.0%	maximum	-77.4
99.5%		-77.4
97.5%		-77.4
90.0%		-77.4
75.0%	quartile	-77.4
50.0%	median	-77.4
25.0%	quartile	-77.4
10.0%		-77.4
2.5%		-77.4
0.5%		-77.4
0.0%	minimum	-77.4

Summary Statistics

Mean	-77.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-137 Total dissolution by fusion

Bias



Quantiles

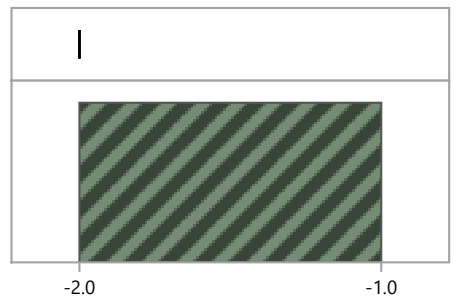
100.0%	maximum	17.9
99.5%		17.9
97.5%		17.9
90.0%		17.9
75.0%	quartile	17.9
50.0%	median	13.3
25.0%	quartile	8.6
10.0%		8.6
2.5%		8.6
0.5%		8.6
0.0%	minimum	8.6

Summary Statistics

Mean	13.3
Std Dev	6.6
Std Err Mean	4.7
Upper 95% Mean	72.3
Lower 95% Mean	-45.8
N	2.0

Distributions Analyte_Method=Cesium-137 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

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

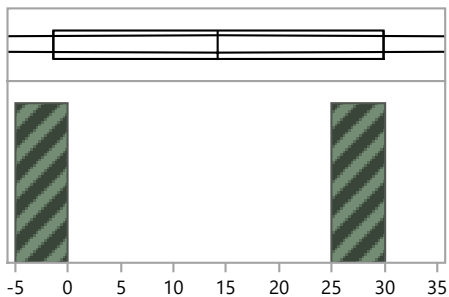
Summary Statistics

Mean	-2.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Cobalt-57 Acid dissolution by strong Aqua Regia, hydrofluoric acid, etc.

Bias



Quantiles

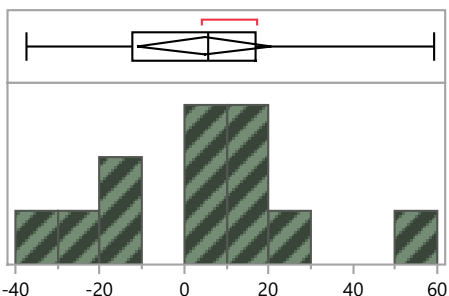
100.0%	maximum	29.9
99.5%		29.9
97.5%		29.9
90.0%		29.9
75.0%	quartile	29.9
50.0%	median	14.3
25.0%	quartile	-1.4
10.0%		-1.4
2.5%		-1.4
0.5%		-1.4
0.0%	minimum	-1.4

Summary Statistics

Mean	14.3
Std Dev	22.1
Std Err Mean	15.7
Upper 95% Mean	213.1
Lower 95% Mean	-184.6
N	2.0

Distributions Analyte_Method=Cobalt-57 No preparation - analyzed as received

Bias



Quantiles

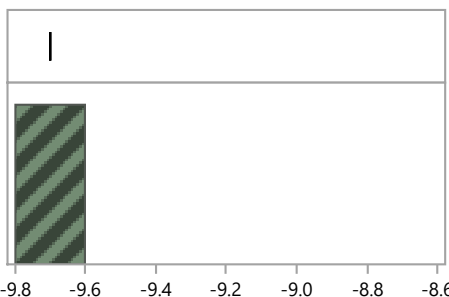
100.0%	maximum	59.0
99.5%		59.0
97.5%		59.0
90.0%		48.6
75.0%	quartile	16.9
50.0%	median	5.6
25.0%	quartile	-12.2
10.0%		-33.3
2.5%		-37.5
0.5%		-37.5
0.0%	minimum	-37.5

Summary Statistics

Mean	4.8
Std Dev	24.8
Std Err Mean	7.2
Upper 95% Mean	20.6
Lower 95% Mean	-11.0
N	12.0

Distributions Analyte_Method=Cobalt-57 Other

Bias



Quantiles

100.0%	maximum	-9.7
99.5%		-9.7
97.5%		-9.7
90.0%		-9.7
75.0%	quartile	-9.7
50.0%	median	-9.7
25.0%	quartile	-9.7
10.0%		-9.7
2.5%		-9.7
0.5%		-9.7
0.0%	minimum	-9.7

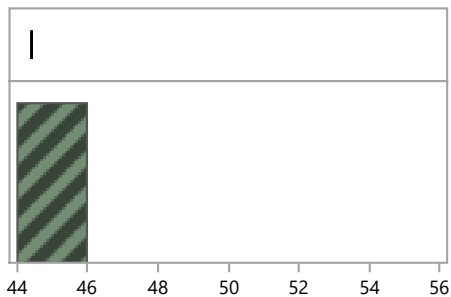
Summary Statistics

Mean	-9.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Cobalt-57 Total dissolution by fusion

Bias



Quantiles

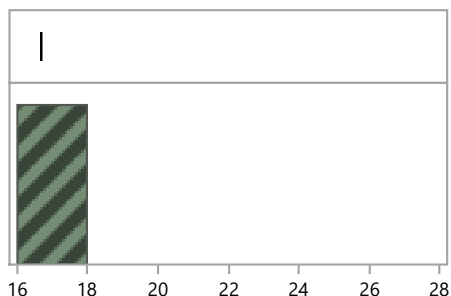
100.0%	maximum	44.4
99.5%		44.4
97.5%		44.4
90.0%		44.4
75.0%	quartile	44.4
50.0%	median	44.4
25.0%	quartile	44.4
10.0%		44.4
2.5%		44.4
0.5%		44.4
0.0%	minimum	44.4

Summary Statistics

Mean	44.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cobalt-57 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

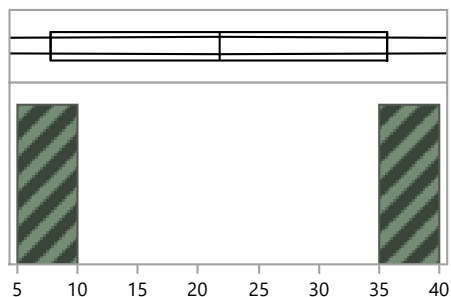
100.0%	maximum	16.7
99.5%		16.7
97.5%		16.7
90.0%		16.7
75.0%	quartile	16.7
50.0%	median	16.7
25.0%	quartile	16.7
10.0%		16.7
2.5%		16.7
0.5%		16.7
0.0%	minimum	16.7

Summary Statistics

Mean	16.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cobalt-60 Acid dissolution by strong Aqua Regia, hydrofluoric acid, etc.

Bias



Quantiles

100.0%	maximum	35.7
99.5%		35.7
97.5%		35.7
90.0%		35.7
75.0%	quartile	35.7
50.0%	median	21.8
25.0%	quartile	7.8
10.0%		7.8
2.5%		7.8
0.5%		7.8
0.0%	minimum	7.8

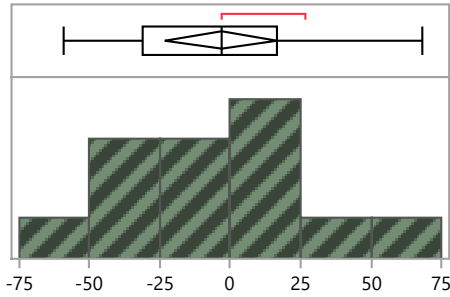
Summary Statistics

Mean	21.8
Std Dev	19.7
Std Err Mean	14.0
Upper 95% Mean	199.0
Lower 95% Mean	-155.5
N	2.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Cobalt-60 No preparation - analyzed as received

Bias



Quantiles

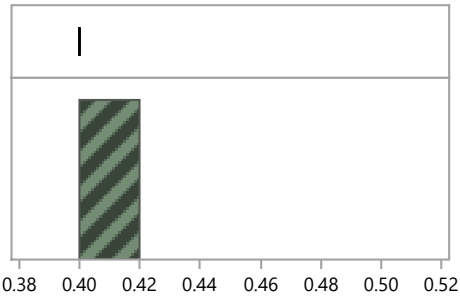
100.0%	maximum	68.1
99.5%		68.1
97.5%		68.1
90.0%		51.4
75.0%	quartile	16.4
50.0%	median	-3.3
25.0%	quartile	-31.3
10.0%		-50.0
2.5%		-59.1
0.5%		-59.1
0.0%	minimum	-59.1

Summary Statistics

Mean	-3.3
Std Dev	32.8
Std Err Mean	9.1
Upper 95% Mean	16.5
Lower 95% Mean	-23.1
N	13.0

Distributions Analyte_Method=Cobalt-60 Other

Bias



Quantiles

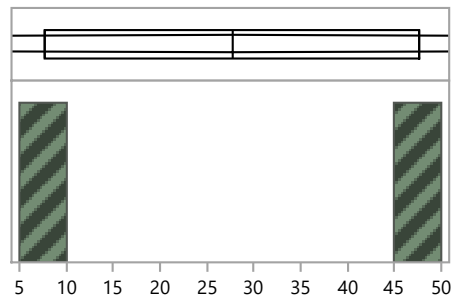
100.0%	maximum	0.4
99.5%		0.4
97.5%		0.4
90.0%		0.4
75.0%	quartile	0.4
50.0%	median	0.4
25.0%	quartile	0.4
10.0%		0.4
2.5%		0.4
0.5%		0.4
0.0%	minimum	0.4

Summary Statistics

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

Distributions Analyte_Method=Cobalt-60 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	47.6
99.5%		47.6
97.5%		47.6
90.0%		47.6
75.0%	quartile	47.6
50.0%	median	27.7
25.0%	quartile	7.8
10.0%		7.8
2.5%		7.8
0.5%		7.8
0.0%	minimum	7.8

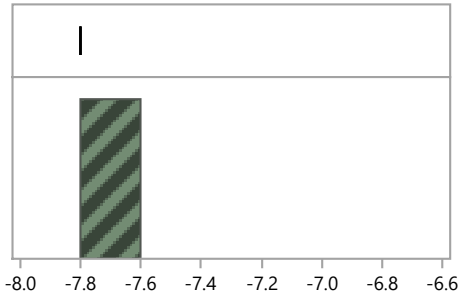
Summary Statistics

Mean	27.7
Std Dev	28.1
Std Err Mean	19.9
Upper 95% Mean	280.6
Lower 95% Mean	-225.2
N	2.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Cobalt-60 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

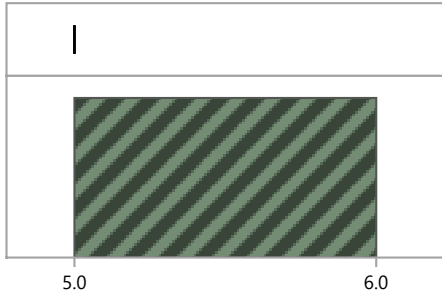
100.0%	maximum	-7.8
99.5%		-7.8
97.5%		-7.8
90.0%		-7.8
75.0%	quartile	-7.8
50.0%	median	-7.8
25.0%	quartile	-7.8
10.0%		-7.8
2.5%		-7.8
0.5%		-7.8
0.0%	minimum	-7.8

Summary Statistics

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

Distributions Analyte_Method=Plutonium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

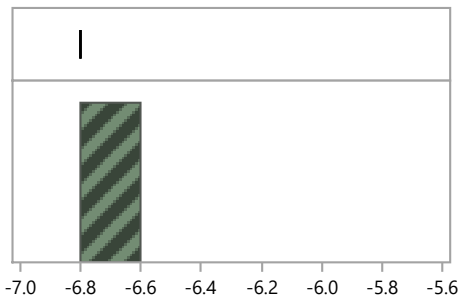
100.0%	maximum	5.0
99.5%		5.0
97.5%		5.0
90.0%		5.0
75.0%	quartile	5.0
50.0%	median	5.0
25.0%	quartile	5.0
10.0%		5.0
2.5%		5.0
0.5%		5.0
0.0%	minimum	5.0

Summary Statistics

Mean	5.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-238 Other

Bias



Quantiles

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

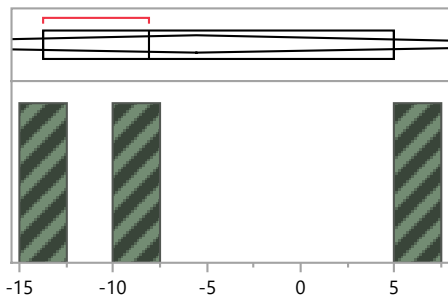
Summary Statistics

Mean	-6.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Plutonium-238 Total dissolution by fusion

Bias



Quantiles

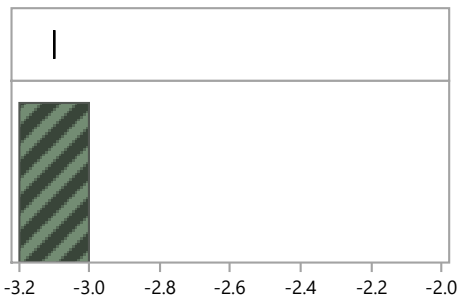
100.0%	maximum	5.0
99.5%		5.0
97.5%		5.0
90.0%		5.0
75.0%	quartile	5.0
50.0%	median	-8.1
25.0%	quartile	-13.7
10.0%		-13.7
2.5%		-13.7
0.5%		-13.7
0.0%	minimum	-13.7

Summary Statistics

Mean	-5.6
Std Dev	9.6
Std Err Mean	5.5
Upper 95% Mean	18.2
Lower 95% Mean	-29.4
N	3.0

Distributions Analyte_Method=Plutonium-238 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

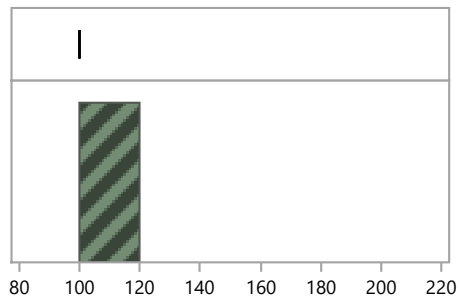
100.0%	maximum	-3.1
99.5%		-3.1
97.5%		-3.1
90.0%		-3.1
75.0%	quartile	-3.1
50.0%	median	-3.1
25.0%	quartile	-3.1
10.0%		-3.1
2.5%		-3.1
0.5%		-3.1
0.0%	minimum	-3.1

Summary Statistics

Mean	-3.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-239/240 Acid dissolution by strong Aqua Regia, hydrofluoric acid, etc.

Bias



Quantiles

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

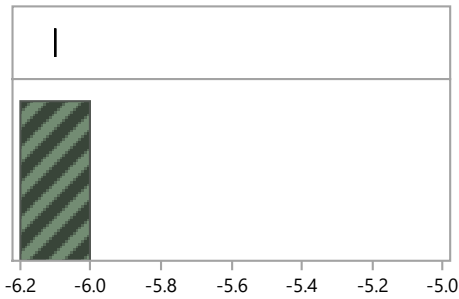
Summary Statistics

Mean	100.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

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

Bias



Quantiles

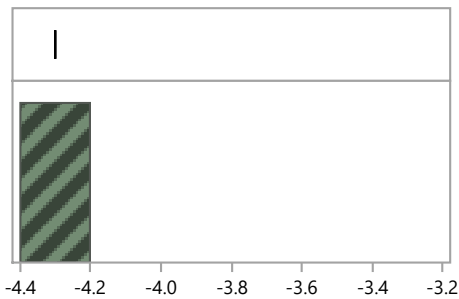
100.0%	maximum	-6.1
99.5%		-6.1
97.5%		-6.1
90.0%		-6.1
75.0%	quartile	-6.1
50.0%	median	-6.1
25.0%	quartile	-6.1
10.0%		-6.1
2.5%		-6.1
0.5%		-6.1
0.0%	minimum	-6.1

Summary Statistics

Mean	-6.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-239/240 Other

Bias



Quantiles

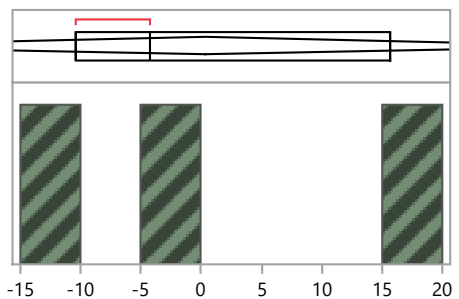
100.0%	maximum	-4.3
99.5%		-4.3
97.5%		-4.3
90.0%		-4.3
75.0%	quartile	-4.3
50.0%	median	-4.3
25.0%	quartile	-4.3
10.0%		-4.3
2.5%		-4.3
0.5%		-4.3
0.0%	minimum	-4.3

Summary Statistics

Mean	-4.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-239/240 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	15.7
99.5%		15.7
97.5%		15.7
90.0%		15.7
75.0%	quartile	15.7
50.0%	median	-4.3
25.0%	quartile	-10.4
10.0%		-10.4
2.5%		-10.4
0.5%		-10.4
0.0%	minimum	-10.4

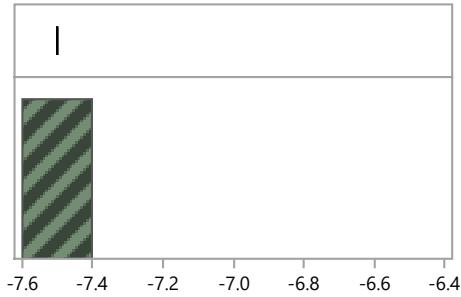
Summary Statistics

Mean	0.3
Std Dev	13.7
Std Err Mean	7.9
Upper 95% Mean	34.2
Lower 95% Mean	-33.6
N	3.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Plutonium-239/240 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

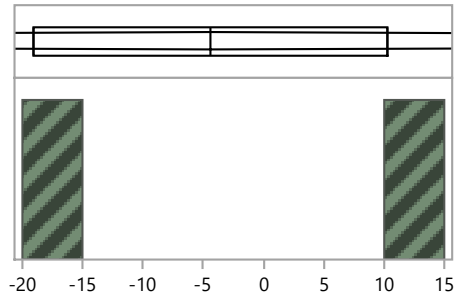
100.0%	maximum	-7.5
99.5%		-7.5
97.5%		-7.5
90.0%		-7.5
75.0%	quartile	-7.5
50.0%	median	-7.5
25.0%	quartile	-7.5
10.0%		-7.5
2.5%		-7.5
0.5%		-7.5
0.0%	minimum	-7.5

Summary Statistics

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

Distributions Analyte_Method=Strontium-90 Acid leaching without hydrofluoric acid

Bias



Quantiles

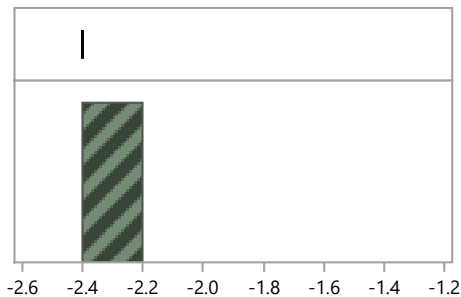
100.0%	maximum	10.3
99.5%		10.3
97.5%		10.3
90.0%		10.3
75.0%	quartile	10.3
50.0%	median	-4.4
25.0%	quartile	-19.0
10.0%		-19.0
2.5%		-19.0
0.5%		-19.0
0.0%	minimum	-19.0

Summary Statistics

Mean	-4.4
Std Dev	20.7
Std Err Mean	14.7
Upper 95% Mean	181.8
Lower 95% Mean	-190.5
N	2.0

Distributions Analyte_Method=Strontium-90 EPA 905, Radioactive Strontium, 600/4-80-032

Bias



Quantiles

100.0%	maximum	-2.4
99.5%		-2.4
97.5%		-2.4
90.0%		-2.4
75.0%	quartile	-2.4
50.0%	median	-2.4
25.0%	quartile	-2.4
10.0%		-2.4
2.5%		-2.4
0.5%		-2.4
0.0%	minimum	-2.4

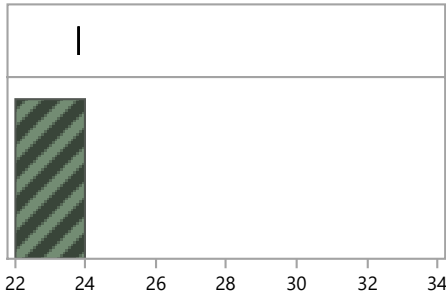
Summary Statistics

Mean	-2.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Strontium-90 No preparation - analyzed as received

Bias



Quantiles

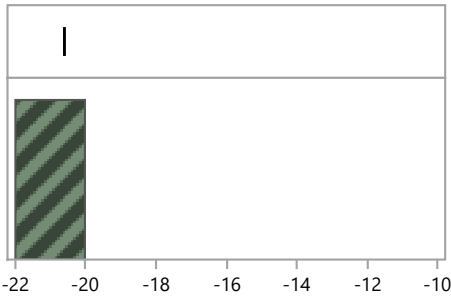
100.0%	maximum	23.8
99.5%		23.8
97.5%		23.8
90.0%		23.8
75.0%	quartile	23.8
50.0%	median	23.8
25.0%	quartile	23.8
10.0%		23.8
2.5%		23.8
0.5%		23.8
0.0%	minimum	23.8

Summary Statistics

Mean	23.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Strontium-90 Other

Bias



Quantiles

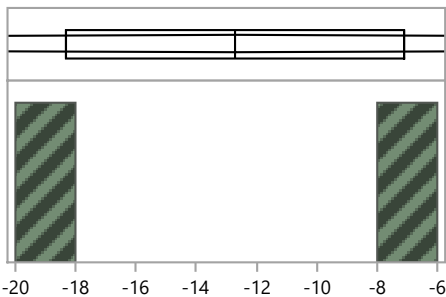
100.0%	maximum	-20.6
99.5%		-20.6
97.5%		-20.6
90.0%		-20.6
75.0%	quartile	-20.6
50.0%	median	-20.6
25.0%	quartile	-20.6
10.0%		-20.6
2.5%		-20.6
0.5%		-20.6
0.0%	minimum	-20.6

Summary Statistics

Mean	-20.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Strontium-90 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	-7.1
99.5%		-7.1
97.5%		-7.1
90.0%		-7.1
75.0%	quartile	-7.1
50.0%	median	-12.7
25.0%	quartile	-18.3
10.0%		-18.3
2.5%		-18.3
0.5%		-18.3
0.0%	minimum	-18.3

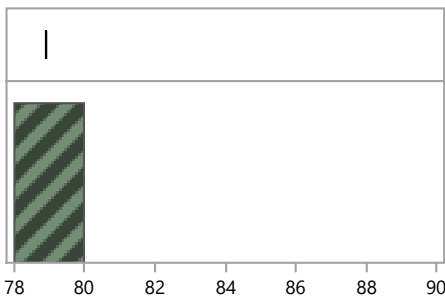
Summary Statistics

Mean	-12.7
Std Dev	7.9
Std Err Mean	5.6
Upper 95% Mean	58.5
Lower 95% Mean	-83.9
N	2.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 Acid dissolution by strong Aqua Regia, hydrofluoric acid, etc.

Bias



Quantiles

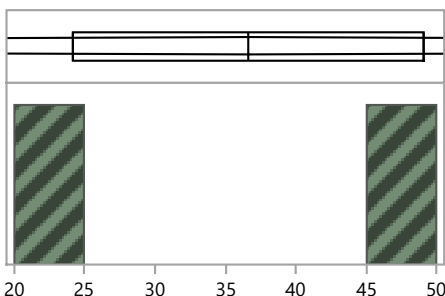
100.0%	maximum	78.9
99.5%		78.9
97.5%		78.9
90.0%		78.9
75.0%	quartile	78.9
50.0%	median	78.9
25.0%	quartile	78.9
10.0%		78.9
2.5%		78.9
0.5%		78.9
0.0%	minimum	78.9

Summary Statistics

Mean	78.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Acid leaching without hydrofluoric acid

Bias



Quantiles

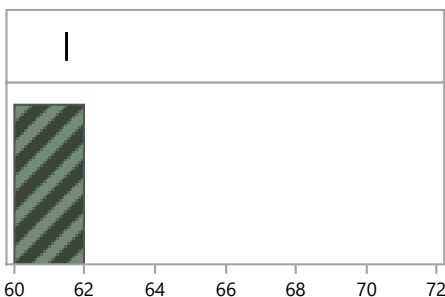
100.0%	maximum	49.1
99.5%		49.1
97.5%		49.1
90.0%		49.1
75.0%	quartile	49.1
50.0%	median	36.7
25.0%	quartile	24.2
10.0%		24.2
2.5%		24.2
0.5%		24.2
0.0%	minimum	24.2

Summary Statistics

Mean	36.7
Std Dev	17.6
Std Err Mean	12.5
Upper 95% Mean	194.8
Lower 95% Mean	-121.5
N	2.0

Distributions Analyte_Method=Uranium-234 Other

Bias



Quantiles

100.0%	maximum	61.5
99.5%		61.5
97.5%		61.5
90.0%		61.5
75.0%	quartile	61.5
50.0%	median	61.5
25.0%	quartile	61.5
10.0%		61.5
2.5%		61.5
0.5%		61.5
0.0%	minimum	61.5

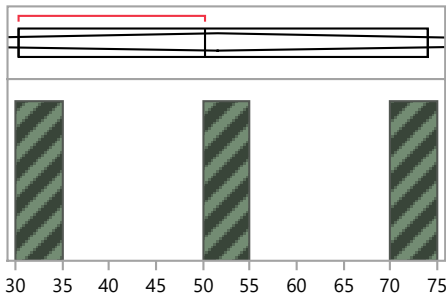
Summary Statistics

Mean	61.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 Total dissolution by fusion

Bias



Quantiles

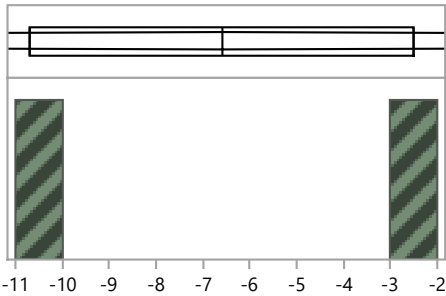
100.0%	maximum	73.9
99.5%		73.9
97.5%		73.9
90.0%		73.9
75.0%	quartile	73.9
50.0%	median	50.3
25.0%	quartile	30.4
10.0%		30.4
2.5%		30.4
0.5%		30.4
0.0%	minimum	30.4

Summary Statistics

Mean	51.5
Std Dev	21.8
Std Err Mean	12.6
Upper 95% Mean	105.6
Lower 95% Mean	-2.6
N	3.0

Distributions Analyte_Method=Uranium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

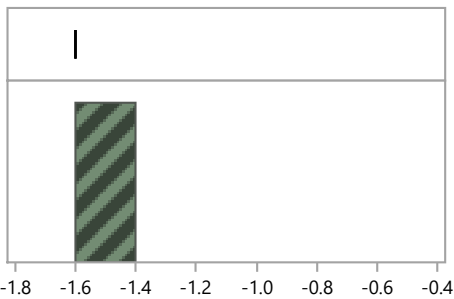
100.0%	maximum	-2.5
99.5%		-2.5
97.5%		-2.5
90.0%		-2.5
75.0%	quartile	-2.5
50.0%	median	-6.6
25.0%	quartile	-10.7
10.0%		-10.7
2.5%		-10.7
0.5%		-10.7
0.0%	minimum	-10.7

Summary Statistics

Mean	-6.6
Std Dev	5.8
Std Err Mean	4.1
Upper 95% Mean	45.5
Lower 95% Mean	-58.7
N	2.0

Distributions Analyte_Method=Uranium-238 Other

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	-1.6
25.0%	quartile	-1.6
10.0%		-1.6
2.5%		-1.6
0.5%		-1.6
0.0%	minimum	-1.6

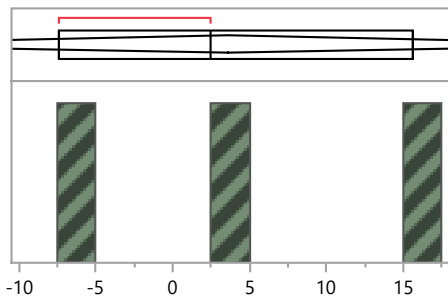
Summary Statistics

Mean	-1.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Uranium-238 Total dissolution by fusion

Bias



Quantiles

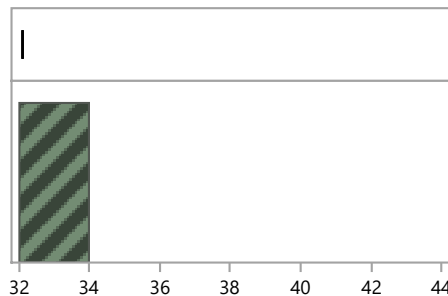
100.0%	maximum	15.6
99.5%		15.6
97.5%		15.6
90.0%		15.6
75.0%	quartile	15.6
50.0%	median	2.5
25.0%	quartile	-7.4
10.0%		-7.4
2.5%		-7.4
0.5%		-7.4
0.0%	minimum	-7.4

Summary Statistics

Mean	3.6
Std Dev	11.5
Std Err Mean	6.7
Upper 95% Mean	32.2
Lower 95% Mean	-25.1
N	3.0

Distributions Analyte_Method=Uranium-238 Wet ash - Acid digestion - the use of oxidizers to destroy organics

Bias



Quantiles

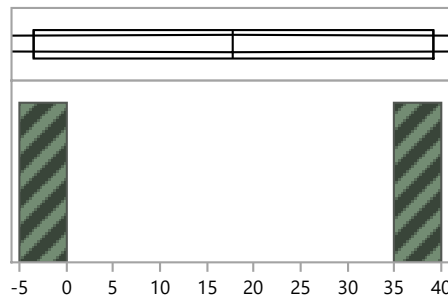
100.0%	maximum	32.1
99.5%		32.1
97.5%		32.1
90.0%		32.1
75.0%	quartile	32.1
50.0%	median	32.1
25.0%	quartile	32.1
10.0%		32.1
2.5%		32.1
0.5%		32.1
0.0%	minimum	32.1

Summary Statistics

Mean	32.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Zinc-65 No preparation - analyzed as received

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	17.8
25.0%	quartile	-3.5
10.0%		-3.5
2.5%		-3.5
0.5%		-3.5
0.0%	minimum	-3.5

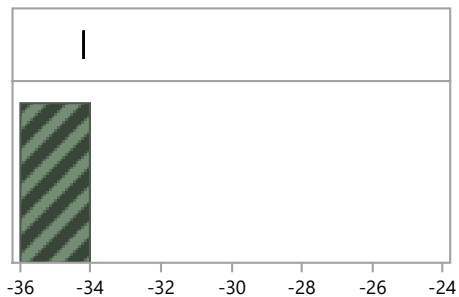
Summary Statistics

Mean	17.8
Std Dev	30.1
Std Err Mean	21.3
Upper 95% Mean	288.4
Lower 95% Mean	-252.8
N	2.0

XrM Distribution by Prep Method

Distributions Analyte_Method=Zinc-65 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	-34.2
99.5%		-34.2
97.5%		-34.2
90.0%		-34.2
75.0%	quartile	-34.2
50.0%	median	-34.2
25.0%	quartile	-34.2
10.0%		-34.2
2.5%		-34.2
0.5%		-34.2
0.0%	minimum	-34.2

Summary Statistics

Mean	-34.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0