

Laboratories Receiving MAPEP Gross Alpha/Beta Water Standard

ADEM01	Alabama Department of Environmental Management
AFOH01	AFIOH/SDRR
ANLA01	Argonne National Laboratory/Analytical Chemistry Lab.
ANTE01	Paragon Analytics a Division of DataChem Laboratories, Inc.
ARPL01	Analytical Support Operations - Radiochemical Processing Lab
ARSL01	American Radiation Services Inc.
ATLI01	ATL International, Inc.
AY1201	BWXT Y-12, Analytical Chemistry Organization Laboratory
CDHS01	California Department of Health Services
CESL01	Lawrence Livermore National Laboratory - EMRL
CHMH01	222-S Laboratory
CMRC01	Carlsbad Environmental Monitoring and Research Center
CORE02	STL Denver
DEHS01	Department of Environmental Health & Safety
EMBW01	CH2M Hill, Mound Inc., Mound, Environmental Monitoring
EPAL01	U. S. EPA Office of Radiation and Indoor Air
ERCL01	Public Health Laboratories
ERHD99	Radiation Protection Bureau ERHD NMS
ERLG01	Environmental Radiation Laboratory
ERPD99	Environmental Radiation Protection Division
FDHE01	Florida Dept of Health Environmental Laboratory
FERM01	Fluor Fernald
FNAL01	Fermi National Accelerator Laboratory (FermiLab)
GENE01	General Engineering Laboratories, LLC
GPLP01	GPL Laboratories, LLLP
GROW01	FGL Environmental
HCAL01	Hazards Control Analytical Lab
HWRL01	Lawrence Livermore National Laboratory - HWRL
IAEA99	International Atomic Energy Agency
ISUP01	ISU - Department of Physics/Health Physics/EAL
JAEC99	Radiation Measurements Laboratory
KAST99	Environmental Studies Laboratory
LOCK01	ICP Analytical Laboratories Department
LOCK03	RADIATION MEASUREMENTS LABORATORY/AEDL
MART01	USEC, Inc.
MART02	United States Enrichment Corporation
MART03	Radioactive Material Analysis Laboratory
MDPH01	MDPH-Radiation Control Program
NARL01	National Air and Radiation Environmental Laboratory
NESI01	BWXT Services-Nuclear Environmental Laboratory Services
NJDH01	New Jersey Dept. of Health & Senior Services, PHEL, ECLS
NRLL99	National Radiation Laboratory
NTSI01	Nuclear Technology Services, Inc.
OBGL01	O'Brien & Gere Laboratories, Inc.
ODHL01	Ohio Department of Health Laboratory
ORIS01	ORISE/ESSAP

OTLI01	Outreach Technologies, Inc.
PESL01	Environmental Science Lab PNNL/ESL
QUAN01	STL St. Louis
QUAN03	SEVERN TRENT LABORATORIES RICHLAND
RECC01	GEL Laboratories of Ohio, LLC
RPSC01	Radiation Protection Service
RSAL01	RSA Laboratories, Inc.
SAVA01	WSRC/SAVANNAH RIVER NATIONAL LABORATORY/ADS
SCAL01	Sanford Cohen and Associates, Inc.
SEML01	SRS Environmental Monitoring Laboratory
SLDL01	Scientific Laboratory Division
SNRC99	Soreq NRC
SOUT01	Southwest Research Institute
SRPD01	Sandia National Laboratories, Radiation Protection Sample Diagnostics
TDHL01	Texas Department of State Health Services Laboratory
TELE01	TELEDYNE BROWN ENGINEERING - ENVIRONMENTAL SERVICES
TELE02	Environmental, Inc., Midwest Lab
TMAE01	Eberline Services, Inc.
TMAO01	EBERLINE SERVICES OAK RIDGE LABORATORY
TMAR01	Eberline Services
TNUT01	FUSRAP
UQNP99	University of Qatar - Nuclear Physics Lab
WEST03	Waste Sampling and Characterization Facility
WEST04	PACE ANALYTICAL SERVICES WALTZ MILL SITE
WSHL01	Wisconsin State Laboratory of Hygiene
WVDP01	WVDP Environmental Laboratory
YAEC01	Framatome ANP Environmental Laboratory

Labs Not Reporting GrW

LAB_CODE LAB_NAME

ANLA01	Argonne National Laboratory/Analytical Chemistry Lab.
CDHS01	California Department of Health Services
CMRC01	Carlsbad Environmental Monitoring and Research Center
DEHS01	Department of Environmental Health & Safety
EMBW01	CH2M Hill, Mound Inc., Mound, Environmental Monitoring
EPAL01	U. S. EPA Office of Radiation and Indoor Air
ERHD99	Radiation Protection Bureau ERHD NMS
FERM01	Fluor Fernald
IAEA99	International Atomic Energy Agency
JAEC99	Radiation Measurements Laboratory
KAST99	Environmental Studies Laboratory
LOCK03	RADIATION MEASUREMENTS LABORATORY/AEDL
MDPH01	MDPH-Radiation Control Program
PESL01	Environmental Science Lab PNNL/ESL
SAVA01	WSRC/SAVANNAH RIVER NATIONAL LABORATORY/ADS
SRPD01	Sandia National Laboratories, Radiation Protection Sample Dia
UQNP99	University of Qatar - Nuclear Physics Lab
YAEC01	Framatome ANP Environmental Laboratory

Mixed Analyte Performance Evaluation Program

Statistical Summary

Sample ID: MAPEP-05-GrW14

Gross Alpha / Beta Water Standard

Analyte	T(1)	A(2)	Grand Mean	Std. Dev.	Reference Value	Analyte Text	Acceptance Limits	Units
Gross alpha	55	53	0.79	0.20	0.790		0.21 - 1.38	(Bq/L)
Gross beta	55	53	1.38	0.18	1.350		0.85 - 1.92	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Note:

Outliers are excluded from the statistical summary.

Outliers are defined as laboratory data with a bias greater than 60 percent for gamma spectrometry analyses and 30 percent for all others.

(1) T = Total Number of Laboratories Reporting Analyte.

(2) A = Number of Laboratories with 'Acceptable' Performance.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ADEM01

Alabama Department of Environmental Management

Sample ID: MAPEP-05-GrW14

Central Laboratory

Montgomery AL 36109

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.80	0.790	A		1.3	0.21 - 1.38	0.11		(Bq/L)
Gross beta	1.63	1.350	A		20.7	0.85 - 1.92	0.06		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

AFOH01

AFIOH/SDRR

Sample ID: MAPEP-05-GrW14

2350 Gillingham Dr

Brooks City-Base TX 78235-5103

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.22	0.790	A		54.4	0.21 - 1.38	0.18		(Bq/L)
Gross beta	1.78	1.350	A		31.9	0.85 - 1.92	0.14		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ANTE01

Paragon Analytics a Division of DataChem Laboratories,
225 Commerce Drive
Fort Collins CO 80524-

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.672	0.790	A		-14.9	0.21 - 1.38	0.074		(Bq/L)
Gross beta	1.33	1.350	A		-1.5	0.85 - 1.92	0.12		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ARPL01

Analytical Support Operations - Radiochemical Processi

Sample ID: MAPEP-05-GrW14

PO Box 999

Richland WA 99352

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.717	0.790	A		-9.2	0.21 - 1.38	0.014	L	(Bq/L)
Gross beta	1.45	1.350	A		7.4	0.85 - 1.92	0.03	L	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ARSL01

American Radiation Services Inc.

Sample ID: MAPEP-05-GrW14

2609 North River Road

Port Allen

LA

70767

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.01	0.790	A		27.8	0.21 - 1.38	0.08		(Bq/L)
Gross beta	1.45	1.350	A		7.4	0.85 - 1.92	0.08		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ATLI01

ATL International, Inc.

Sample ID: MAPEP-05-GrW14

20010 Century Blvd, Suite 500

Germantown MD 20874

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.7300	0.790	A		-7.6	0.21 - 1.38	0.0875		(Bq/L)
Gross beta	1.4620	1.350	A		8.3	0.85 - 1.92	0.0970		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

AY1201

BWXT Y-12, Analytical Chemistry Organization Laborato
Y12, NSC, Bldg. 9995, Rm 142
Oak Ridge TN 37831-8189

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.714	0.790	A		-9.6	0.21 - 1.38	0.074		(Bq/L)
Gross beta	1.33	1.350	A		-1.5	0.85 - 1.92	0.092		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

CESL01

Lawrence Livermore National Laboratory - EMRL

Sample ID: MAPEP-05-GrW14

7000 East Avenue

Livermore

CA

94551

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.252	0.790	A		-68.1	0.21 - 1.38	0.0958	H	(Bq/L)
Gross beta	0.782	1.350	N	17	-42.1	0.85 - 1.92	0.475	H	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty $>$ 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty \leq 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty $>$ 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty \leq 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

CHMH01

222-S Laboratory
Hanford MSIN T6-10
Richland

WA 99352

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.514	0.790	A		-34.9	0.21 - 1.38	.057		(Bq/L)
Gross beta	1.39	1.350	A		3.0	0.85 - 1.92	.12		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

CORE02

STL Denver

Sample ID: MAPEP-05-GrW14

4955 Yarrow St

Arvada

CO

80002

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.709	0.790	A		-10.3	0.21 - 1.38	0.036		(Bq/L)
Gross beta	1.209	1.350	A		-10.4	0.85 - 1.92	0.045		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ERCL01

Public Health Laboratories

Sample ID: MAPEP-05-GrW14

1610 N.E. 150 th Srteet

Shoreline

WA

98155-9701

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.95	0.790	A		20.3	0.21 - 1.38	0.12		(Bq/L)
Gross beta	1.41	1.350	A		4.4	0.85 - 1.92	0.10		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ERLG01

Environmental Radiation Laboratory

Sample ID: MAPEP-05-GrW14

Georgia Institute of Tech.

Atlanta

GA

30332

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.89	0.790	A		12.7	0.21 - 1.38	.1		(Bq/L)
Gross beta	1.3	1.350	A		-3.7	0.85 - 1.92	.2		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ERPD99

Environmental Radiation Protection Division
Mubarak Al-Kabeer Street, al-Awqaf Compl
Sharq Kuwait 656

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.04	0.790	N	16	-94.9	0.21 - 1.38			(Bq/L)
Gross beta	0.4	1.350	N	16	-70.4	0.85 - 1.92			(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

FDHE01

Florida Dept of Health Environmental Laboratory

Sample ID: MAPEP-05-GrW14

PO Box 680069

Orlando

FL

32868-0069

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.97	0.790	A		22.8	0.21 - 1.38	0.13		(Bq/L)
Gross beta	1.63	1.350	A		20.7	0.85 - 1.92	0.11		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

FNAL01

Fermi National Accelerator Laboratory (FermiLab)

Sample ID: MAPEP-05-GrW14

PO Box 500, MS325

Batavia IL 60510

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.16	0.790	A		-79.7	0.21 - 1.38	0.02		(Bq/L)
Gross beta	1.37	1.350	A		1.5	0.85 - 1.92	0.30	H	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

GENE01

General Engineering Laboratories, LLC

Sample ID: MAPEP-05-GrW14

2040 Savage Road

Charleston SC 29407

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.673	0.790	A		-14.8	0.21 - 1.38	0.038		(Bq/L)
Gross beta	1.343	1.350	A		-0.5	0.85 - 1.92	0.041		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

GPLP01

GPL Laboratories, LLLP

Sample ID: MAPEP-05-GrW14

7210A Corporate Court

Frederick

MD

21703

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.282	0.790	A		-64.3	0.21 - 1.38	0.025		(Bq/L)
Gross beta	0.782	1.350	A		-42.1	0.85 - 1.92	0.026		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

GROW01

FGL Environmental

Sample ID: MAPEP-05-GrW14

853 Corporation St.

Santa Paula CA 93060-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.678	0.790	A		-14.2	0.21 - 1.38	0.07		(Bq/L)
Gross beta	1.27	1.350	A		-5.9	0.85 - 1.92	0.08		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

HCAL01

Hazards Control Analytical Lab

Sample ID: MAPEP-05-GrW14

Lawrence Livermore National

Livermore

CA

94551

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.803	0.790	A		1.6	0.21 - 1.38	.090		(Bq/L)
Gross beta	1.33	1.350	A		-1.5	0.85 - 1.92	0.08		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

HWRL01

Lawrence Livermore National Laboratory - HWRL

Sample ID: MAPEP-05-GrW14

7000 East Avenue

Livermore

CA

94551

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.610	0.790	A		-22.8	0.21 - 1.38	.055		(Bq/L)
Gross beta	1.20	1.350	A		-11.1	0.85 - 1.92	.056		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ISUP01

ISU - Department of Physics/Health Physics/EAL

Sample ID: MAPEP-05-GrW14

785 S. 8th Ave, Rm 120

Pocatello

ID

83209-8106

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.43	0.790	A		-45.6	0.21 - 1.38	0.04		(Bq/L)
Gross beta	1.56	1.350	A		15.6	0.85 - 1.92	0.07		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

LOCK01

ICP Analytical Laboratories Department

Sample ID: MAPEP-05-GrW14

CH2M-WG Idaho, LLC

Idaho Falls

ID

83415-5210

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.861	0.790	A		9.0	0.21 - 1.38	0.090		(Bq/L)
Gross beta	1.63	1.350	A		20.7	0.85 - 1.92	0.11		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

MARTOI

USEC, Inc.

Sample ID: MAPEP-05-GrW14

Lab COC, Bldg. X-710, Rm 222

Piketon OH 45661-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.82	0.790	A		3.8	0.21 - 1.38	0.22	H	(Bq/L)
Gross beta	1.38	1.350	A		2.2	0.85 - 1.92	0.22		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

MART02

United States Enrichment Corporation

Sample ID: MAPEP-05-GrW14

5600 Hobbs Road

Paducah KY 42001-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.610	0.790	A		-22.8	0.21 - 1.38	0.2	H	(Bq/L)
Gross beta	0.690	1.350	A		-48.9	0.85 - 1.92	0.11		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

MART03

Radioactive Material Analysis Laboratory

Sample ID: MAPEP-05-GrW14

ORNL

Oak Ridge

TN

37831-6043

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.59	0.790	A		-25.3	0.21 - 1.38	0.06		(Bq/L)
Gross beta	1.47	1.350	A		8.9	0.85 - 1.92	0.15		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias $\leq 20\%$
 20% $<$ Bias $\leq 30\%$
 Bias $> 30\%$

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

NARL01

National Air and Radiation Environmental Laboratory
540 S. Morris Ave.
Montgomery AL 36115-2601

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.029	0.790	A		30.3	0.21 - 1.38	0.091		(Bq/L)
Gross beta	1.419	1.350	A		5.1	0.85 - 1.92	0.055		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

NESIO1

BWXT Services-Nuclear Environmental Laboratory Servi

Sample ID: MAPEP-05-GrW14

Lynchburg Technology Center

Lynchburg

VA

24504-5447

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.72	0.790	A		-8.9	0.21 - 1.38	0.05		(Bq/L)
Gross beta	1.34	1.350	A		-0.7	0.85 - 1.92	0.04	L	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias $\leq 20\%$
 20% $<$ Bias $\leq 30\%$
 Bias $> 30\%$

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

NJDH01

New Jersey Dept. of Health & Senior Services, PHEL, E
Market and Warren Streets
Trenton NJ 08625-0361

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.966	0.790	A		22.3	0.21 - 1.38	0.047		(Bq/L)
Gross beta	1.47	1.350	A		8.9	0.85 - 1.92	0.03	L	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% < Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL > CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

NRL99

National Radiation Laboratory

Sample ID: MAPEP-05-GrW14

108 Victoria St

Christchurch

Christchu 8001

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.822	0.790	A		4.1	0.21 - 1.38	0.055		(Bq/L)
Gross beta	1.4	1.350	A		3.7	0.85 - 1.92	0.085		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias $\leq 20\%$
 20% $<$ Bias $\leq 30\%$
 Bias $> 30\%$

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

NTSIO1

Nuclear Technology Services, Inc.

Sample ID: MAPEP-05-GrW14

635 Hembree Parkway

Roswell

GA

30076

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.910	0.790	A		15.2	0.21 - 1.38	0.180		(Bq/L)
Gross beta	1.300	1.350	A		-3.7	0.85 - 1.92	0.100		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

OBGL01

O'Brien & Gere Laboratories, Inc.

Sample ID: MAPEP-05-GrW14

PO Box 4873

Syracuse

NY

13221-4873

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.704	0.790	A		-10.9	0.21 - 1.38	0.14		(Bq/L)
Gross beta	1.19	1.350	A		-11.9	0.85 - 1.92	0.16		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ODH101

Ohio Department of Health Laboratory

Sample ID: MAPEP-05-GrW14

1571 Perry St

Columbus

OH

43201

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.84	0.790	A		6.3	0.21 - 1.38	0.20	H	(Bq/L)
Gross beta	1.18	1.350	A		-12.6	0.85 - 1.92	0.26	H	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

ORIS01

ORISE/ESSAP

Sample ID: MAPEP-05-GrW14

PO Box 117

Oak Ridge

TN

37831-0117

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.68	0.790	A		-13.9	0.21 - 1.38	0.06		(Bq/L)
Gross beta	1.23	1.350	A		-8.9	0.85 - 1.92	0.08		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

OTLI01

Outreach Technologies, Inc.

Sample ID: MAPEP-05-GrW14

311 N. Aspen

Broken Arrow

OK

74012-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.02	0.790	A		29.1	0.21 - 1.38	0.174		(Bq/L)
Gross beta	1.58	1.350	A		17.0	0.85 - 1.92	0.29		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

QUAN01

STL St. Louis

Sample ID: MAPEP-05-GrW14

13715 Rider Trail North

Earth City

MO

63045-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.776	0.790	A		-1.8	0.21 - 1.38	0.053		(Bq/L)
Gross beta	1.27	1.350	A		-5.9	0.85 - 1.92	0.04		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

QUAN03

SEVERN TRENT LABORATORIES RICHLAND
2800 GEORGE WASHINGTON WAY
RICHLAND WA 99354-

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.606	0.790	A		-23.3	0.21 - 1.38	0.0739		(Bq/L)
Gross beta	1.28	1.350	A		-5.2	0.85 - 1.92	0.11		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% < Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL > CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

RECC01

GEL Laboratories of Ohio, LLC

Sample ID: MAPEP-05-GrW14

6954 Cornell Road

Cincinnati

OH

45242-3025

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.747	0.790	A		-5.4	0.21 - 1.38	.0615		(Bq/L)
Gross beta	1.51	1.350	A		11.9	0.85 - 1.92	.0978		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

RPSC01

Radiation Protection Service

Sample ID: MAPEP-05-GrW14

Ontario Ministry of Labour

Weston

Ontario

M9P 3T1

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.03	0.790	A		30.4	0.21 - 1.38	0.24	H	(Bq/L)
Gross beta	1.22	1.350	A		-9.6	0.85 - 1.92	0.07		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

RSAL01

RSA Laboratories, Inc.

Sample ID: MAPEP-05-GrW14

PO Box 61

Hebron

CT

06248

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.10	0.790	A		39.2	0.21 - 1.38	.17		(Bq/L)
Gross beta	1.69	1.350	A		25.2	0.85 - 1.92	.16		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

SCAL01

Sanford Cohen and Associates, Inc.

Sample ID: MAPEP-05-GrW14

1000 Monticello Court

Montgomery AL 36117-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.835	0.790	A		5.7	0.21 - 1.38	0.213	H	(Bq/L)
Gross beta	1.29	1.350	A		-4.4	0.85 - 1.92	0.195		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

SEML01

SRS Environmental Monitoring Laboratory

Sample ID: MAPEP-05-GrW14

Bldg 735-B

Aiken

SC

29808

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.00	0.790	A		26.6	0.21 - 1.38	0.18		(Bq/L)
Gross beta	1.46	1.350	A		8.1	0.85 - 1.92	0.20		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL > CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

SLDL01

Scientific Laboratory Division

Sample ID: MAPEP-05-GrW14

PO Box 4700

Albuquerque

NM

87196-4700

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.70	0.790	A		-11.4	0.21 - 1.38	0.08		(Bq/L)
Gross beta	1.34	1.350	A		-0.7	0.85 - 1.92	0.14		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

SNRC99

Soreq NRC

Sample ID: MAPEP-05-GrW14

Radioactivity Measurement Section

Yavne

81800

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	080	0.790	N		10026.6	0.21 - 1.38	0.09	L	(Bq/L)
Gross beta	1.71	1.350	A		26.7	0.85 - 1.92	0.19		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

SOUT01

Southwest Research Institute
6220 Culebra Rd.
San Antonio TX 78228-0510

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.863	0.790	A		9.2	0.21 - 1.38	0.149		(Bq/L)
Gross beta	1.37	1.350	A		1.5	0.85 - 1.92	0.180		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

TDHL01

Texas Department of State Health Services Laboratory
1100 W 49th Street
Austin TX 78756

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.892	0.790	A		12.9	0.21 - 1.38	0.089		(Bq/L)
Gross beta	1.49	1.350	A		10.4	0.85 - 1.92	0.13		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

TELE01

TELEDYNE BROWN ENGINEERING - ENVIRONMENT

Sample ID: MAPEP-05-GrW14

2508 Quality Lane

Knoxville

TN

37931-6819

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	8.58E-01	0.790	A		8.6	0.21 - 1.38	2.53E-01	H	(Bq/L)
Gross beta	1.22E+00	1.350	A		-9.6	0.85 - 1.92	1.36E-01		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

TELE02

Environmental, Inc., Midwest Lab

Sample ID: MAPEP-05-GrW14

700 Landwehr Road

Northbrook IL 60062-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.57	0.790	A		-27.8	0.21 - 1.38	0.05		(Bq/L)
Gross beta	1.36	1.350	A		0.7	0.85 - 1.92	0.05		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

TMAE01

Eberline Services, Inc.
7021 Pan American Freeway N.E.
Albuquerque NM 87109-

Sample ID: MAPEP-05-GrW14

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.01	0.790	A		27.8	0.21 - 1.38	0.173		(Bq/L)
Gross beta	1.22	1.350	A		-9.6	0.85 - 1.92	0.154		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
W = Result acceptable with warning
N = Result not acceptable
L = Uncertainty potentially too low
H = Uncertainty potentially too high
Q = Participant should evaluate reported value
QL = Quantitation Limit
RW = Report Warning
NR = Not Reported

Bias \leq 20%
20% $<$ Bias \leq 30%
Bias $>$ 30%

Flag Text

1 - False Positive
2 - False Negative
4 - Sensitivity Evaluation
5 - Total Metal
6 - Not Evaluated
7 - DL $>$ CLP Limit
9 - Check QL
10 - Check Isomer
11 - False Positive Test, Value Not Reported
14 - Solubility Issue
15 - Refractory
16 - Reported zero uncertainty
17 - NOT DETECTED, reported a statistically zero result.
18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

TMA001

EBERLINE SERVICES OAK RIDGE LABORATORY

Sample ID: MAPEP-05-GrW14

601 SCARBORO RD

OAK RIDGE TN 37830-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.717	0.790	A		-9.2	0.21 - 1.38	0.057		(Bq/L)
Gross beta	1.741	1.350	A		29.0	0.85 - 1.92	0.075		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias $\leq 20\%$
 20% $<$ Bias $\leq 30\%$
 Bias $> 30\%$

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

TMAR01

Eberline Services

Sample ID: MAPEP-05-GrW14

2030 Wright Ave

Richmond

CA

94804-0040

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.576	0.790	A		-27.1	0.21 - 1.38	0.079		(Bq/L)
Gross beta	1.36	1.350	A		0.7	0.85 - 1.92	0.135		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

TNUT01

FUSRAP

Sample ID: MAPEP-05-GrW14

8945 LATTY AVE

BERKELEY

MO

63134-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.9464	0.790	A		19.8	0.21 - 1.38	0.093		(Bq/L)
Gross beta	1.018	1.350	A		-24.6	0.85 - 1.92	0.089		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

WEST03

Waste Sampling and Characterization Facility

Sample ID: MAPEP-05-GrW14

PO Box 1000, S3-30

Richland

WA

99352

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.85	0.790	A		7.6	0.21 - 1.38	0.07		(Bq/L)
Gross beta	1.26	1.350	A		-6.7	0.85 - 1.92	0.07		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

WEST04

PACE ANALYTICAL SERVICES WALTZ MILL SITE

Sample ID: MAPEP-05-GrW14

P.O. BOX 158

MADISON

PA

15663-0158

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.877	0.790	A		11.0	0.21 - 1.38	0.230	H	(Bq/L)
Gross beta	1.269	1.350	A		-6.0	0.85 - 1.92	0.260	H	(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

WSHL01

Wisconsin State Laboratory of Hygiene

Sample ID: MAPEP-05-GrW14

2601 Agriculture Drive

Madison

WI

53718

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.84	0.790	A		6.3	0.21 - 1.38	0.16		(Bq/L)
Gross beta	1.54	1.350	A		14.1	0.85 - 1.92	0.15		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Mixed Analyte Performance Evaluation Program

Laboratory Results - Gross alpha / beta Water Standard

WVDP01

WVDP Environmental Laboratory

Sample ID: MAPEP-05-GrW14

10282 Rock Springs Road

West Valley NY 14171

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.845	0.790	A		7.0	0.21 - 1.38	0.0470		(Bq/L)
Gross beta	1.50	1.350	A		11.1	0.85 - 1.92	0.0501		(Bq/L)

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Flags:

A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

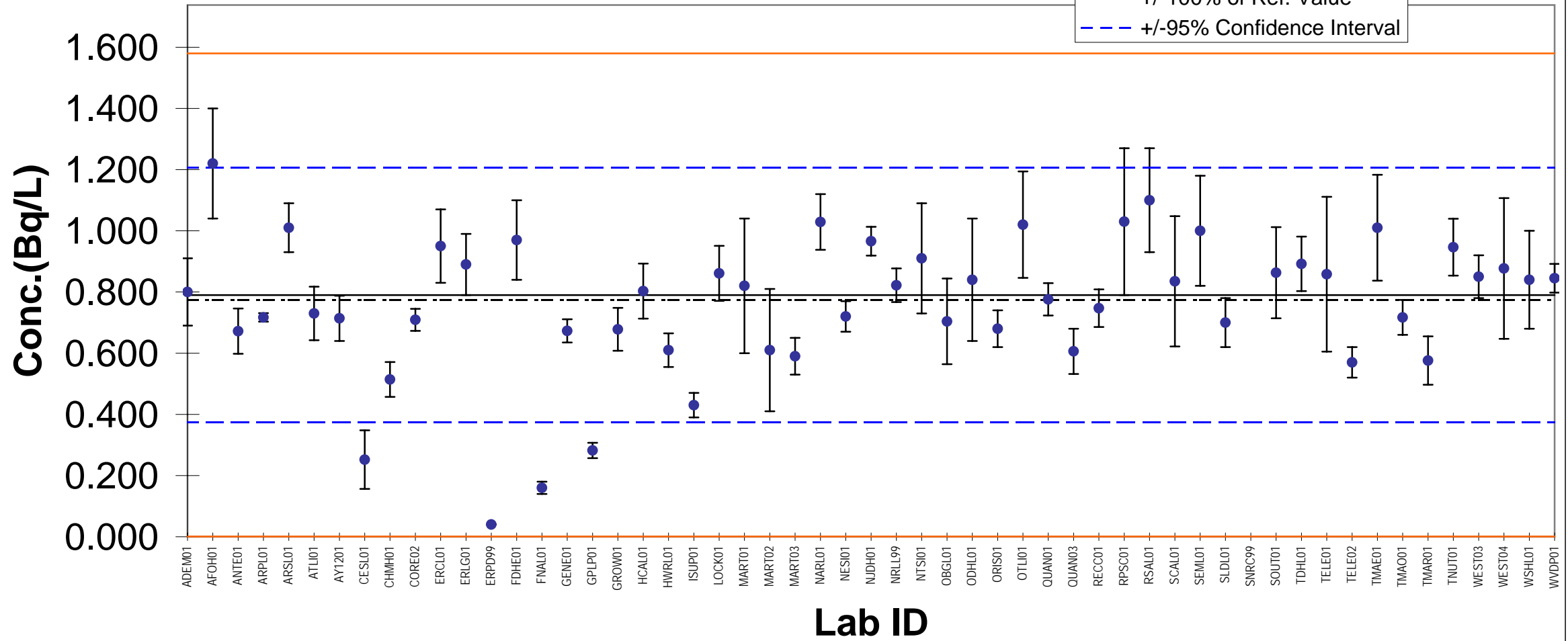
Bias \leq 20%
 20% $<$ Bias \leq 30%
 Bias $>$ 30%

Flag Text

1 - False Positive
 2 - False Negative
 4 - Sensitivity Evaluation
 5 - Total Metal
 6 - Not Evaluated
 7 - DL $>$ CLP Limit
 9 - Check QL
 10 - Check Isomer
 11 - False Positive Test, Value Not Reported
 14 - Solubility Issue
 15 - Refractory
 16 - Reported zero uncertainty
 17 - NOT DETECTED, reported a statistically zero result.
 18 - Sensitivity evaluation, value not reported.

Gross Alpha Water MAPEP-05-GrW14

- Lab Result
- Ref. Value 0.790
- · - · - Mean 0.773
- +/-100% of Ref. Value
- - - +/-95% Confidence Interval



Gross Beta Water MAPEP-05-GrW14

