

Laboratories Receiving MAPEP Gross Alpha/Beta Air Filters

ADEM01	Alabama Department of Environmental Management
AFOH01	AFIOH/SDRR
ANLA01	Argonne National Laboratory/Analytical Chemistry Lab.
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
DBCL01	Durateck, Inc. - Bear Creek Lab
DEHS01	Department of Environmental Health & Safety
DRMG01	BWXT Pantex - D&RMG
EMBW01	CH2M Hill, Mound Inc., Mound, Environmental Monitoring
ENES01	Energy Northwest Environmental Services
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
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab
FNAL01	Fermi National Accelerator Laboratory (FermiLab)
GENE01	General Engineering Laboratories, LLC
GPLP01	GPL Laboratories, LLLP
GROW01	FGL Environmental
HCAL01	Hazards Control Analytical Lab
IAEA99	International Atomic Energy Agency
ISUP01	ISU - Department of Physics/Health Physics/EAL
JAEC99	Radiation Measurements Laboratory
JLNN01	Jefferson Laboratory
KAST99	Environmental Studies Laboratory
KSCF01	Kennedy Space Center, HP 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
NTSI01	Nuclear Technology Services, Inc.
OBGL01	O'Brien & Gere Laboratories, Inc.

ODHL01	Ohio Department of Health Laboratory
ORIS01	ORISE/ESSAP
OTLI01	Outreach Technologies, Inc.
PBRF01	NASA Plum Brook Reactor Facility Lab
QUAN01	STL St. Louis
QUAN03	SEVERN TRENT LABORATORIES RICHLAND
RECC01	GEL Laboratories of Ohio, LLC
RPSC01	Radiation Protection Service
RSAL01	RSA Laboratories, Inc.
SAIC01	SAIC On-Site Laboratory
SCAL01	Sanford Cohen and Associates, Inc.
SEML01	SRS Environmental Monitoring Laboratory
SLDL01	Scientific Laboratory Division
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
UTSG01	UniTech Services Group
WEST03	Waste Sampling and Characterization Facility
WEST04	PACE ANALYTICAL SERVICES WALTZ MILL SITE
WIPP01	WIPP Laboratories
WSHL01	Wisconsin State Laboratory of Hygiene
WVDP01	WVDP Environmental Laboratory
WVPL01	WVDP Radiation Protection Lab
YAEC01	Framatome ANP Environmental Laboratory

Labs Not Reporting GrF

LAB_CODE LAB_NAME

CDHS01	California Department of Health Services
CMRC01	Carlsbad Environmental Monitoring and Research Center
DBCL01	Durateck, Inc. - Bear Creek Lab
EMBW01	CH2M Hill, Mound Inc., Mound, Environmental Monitoring
ENES01	Energy Northwest Environmental Services
EPAL01	U. S. EPA Office of Radiation and Indoor Air
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab
GPLP01	GPL Laboratories, LLLP
GROW01	FGL Environmental
IAEA99	International Atomic Energy Agency
JLNN01	Jefferson Laboratory
KAST99	Environmental Studies Laboratory
MART01	USEC, Inc.
UQNP99	University of Qatar - Nuclear Physics Lab
UTSG01	UniTech Services Group
YAEC01	Framatome ANP Environmental Laboratory

Mixed Analyte Performance Evaluation Program

Statistical Summary

Sample ID: MAPEP-05-GrF14

Gross alpha / beta Radiological Air Filters

Analyte	T(1)	A(2)	Grand Mean	Std. Dev.	Reference Value	Analyte Text	Acceptance Limits	Units
Gross alpha	60	53	0.340	0.149	0.482		>0.0 - 0.964	Bq/sample
Gross beta	61	57	0.875	0.115	0.827		0.414 - 1.240	Bq/sample

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

ADEM01

Alabama Department of Environmental Management

Sample ID: MAPEP-05-GrF14

Central Laboratory

Montgomery

AL

36109

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.37	0.482	A		-23.2	>0.0 - 0.96	0.002	L	Bq/sample
Gross beta	0.82	0.827	A		-0.8	0.41 - 1.24	0.001	L	Bq/sample

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 20% $<$ Bias \leq 30%

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

AFOH01

AFIOH/SDRR

Sample ID: MAPEP-05-GrF14

2350 Gillingham Dr

Brooks City-Base

TX

78235-5103

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.548	0.482	A		13.7	>0.0 - 0.96	0.133	H	Bq/sample
Gross beta	0.964	0.827	A		16.6	0.41 - 1.24	0.112		Bq/sample

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

ANLA01

Argonne National Laboratory/Analytical Chemistry Lab.

Sample ID: MAPEP-05-GrF14

9700 S. Cass Avenue

Argonne

IL

60439-4803

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.54	0.482	A		12.0	>0.0 - 0.96	0.05		Bq/sample
Gross beta	0.98	0.827	A		18.5	0.41 - 1.24	0.05		Bq/sample

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

ARPL01

Analytical Support Operations - Radiochemical Processi

Sample ID: MAPEP-05-GrF14

PO Box 999

Richland

WA

99352

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.282	0.482	A		-41.5	>0.0 - 0.96	0.02		Bq/sample
Gross beta	0.832	0.827	A		0.6	0.41 - 1.24	0.014	L	Bq/sample

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
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 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

ARSL01

American Radiation Services Inc.

Sample ID: MAPEP-05-GrF14

2609 North River Road

Port Allen

LA

70767

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.45	0.482	N		200.8	>0.0 - 0.96	0.17		Bq/sample
Gross beta	2.47	0.827	N		198.7	0.41 - 1.24	0.15		Bq/sample

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:

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 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

ATL101

ATL International, Inc.
20010 Century Blvd, Suite 500
Germantown MD 20874

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.2402	0.482	A		-50.2	>0.0 - 0.96	0.0200		Bq/sample
Gross beta	0.8267	0.827	A		0.0	0.41 - 1.24	0.0316		Bq/sample

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

AY1201

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.331	0.482	A		-31.3	>0.0 - 0.96	0.022		Bq/sample
Gross beta	0.807	0.827	A		-2.4	0.41 - 1.24	0.032		Bq/sample

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).

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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
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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

CESL01

Lawrence Livermore National Laboratory - EMRL

Sample ID: MAPEP-05-GrF14

7000 East Avenue

Livermore

CA

94551

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.239	0.482	A		-50.4	>0.0 - 0.96	0.000499	L	Bq/sample
Gross beta	0.893	0.827	A		8.0	0.41 - 1.24	0.00119	L	Bq/sample

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).

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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

CHMH01

222-S Laboratory
Hanford MSIN T6-10
Richland

WA 99352

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.142	0.482	A		-70.5	>0.0 - 0.96	.01		Bq/sample
Gross beta	.821	0.827	A		-0.7	0.41 - 1.24	.023	L	Bq/sample

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).

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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
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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

CORE02

STL Denver
4955 Yarrow St
Arvada CO 80002

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.229	0.482	N		155.0	>0.0 - 0.96	0.077		Bq/sample
Gross beta	0.894	0.827	A		8.1	0.41 - 1.24	0.031		Bq/sample

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).

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W = Result acceptable with warning
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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

DEHS01

Department of Environmental Health & Safety
North Carolina State Univ.
Raleigh NC 27695-8007

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.525	0.482	A		8.9	>0.0 - 0.96	0.116	H	Bq/sample
Gross beta	0.869	0.827	A		5.1	0.41 - 1.24	0.057		Bq/sample

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

DRMG01

BWXT Pantex - D&RMG

Sample ID: MAPEP-05-GrF14

Bldg 12-122

Gross alpha/beta Air Filters

Amarillo

TX

79120-0020

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.26	0.482	A		-46.1	>0.0 - 0.96	.07	H	Bq/sample
Gross beta	1.06	0.827	A		28.2	0.41 - 1.24	.18		Bq/sample

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

ERCL01

Public Health Laboratories

Sample ID: MAPEP-05-GrF14

1610 N.E. 150 th Srteet

Gross alpha/beta Air Filters

Shoreline

WA

98155-9701

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.29	0.482	A		-39.8	>0.0 - 0.96	0.03		Bq/sample
Gross beta	0.86	0.827	A		4.0	0.41 - 1.24	0.02	L	Bq/sample

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 20% $<$ Bias \leq 30%

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

ERHD99

Radiation Protection Bureau ERHD NMS

Sample ID: MAPEP-05-GrF14

775 Brookfield Road AL6302D1

Gross alpha/beta Air Filters

Ottawa Ontario K1A 1C1

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	NR	0.482				>0.0 - 0.96			Bq/sample
Gross beta	0.9250	0.827	A		11.9	0.41 - 1.24	0.0473		Bq/sample

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

ERLG01

Environmental Radiation Laboratory

Sample ID: MAPEP-05-GrF14

Georgia Institute of Tech.

Gross alpha/beta Air Filters

Atlanta

GA

30332

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.52	0.482	A		7.9	>0.0 - 0.96	.05		Bq/sample
Gross beta	.77	0.827	A		-6.9	0.41 - 1.24	.05		Bq/sample

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 20% $<$ Bias \leq 30%

N = Result not acceptable Bias $>$ 30%

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

ERPD99

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	1.00	0.482	N		107.5	>0.0 - 0.96	0.11		Bq/sample
Gross beta	1.15	0.827	A		39.1	0.41 - 1.24	0.07		Bq/sample

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

FDHE01

Florida Dept of Health Environmental Laboratory

Sample ID: MAPEP-05-GrF14

PO Box 680069

Orlando

FL

32868-0069

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.20	0.482	A		-58.5	>0.0 - 0.96	0.01		Bq/sample
Gross beta	0.95	0.827	A		14.9	0.41 - 1.24	0.03		Bq/sample

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 20% $<$ Bias \leq 30%

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

FNAL01

Fermi National Accelerator Laboratory (FermiLab)

Sample ID: MAPEP-05-GrF14

PO Box 500, MS325

Gross alpha/beta Air Filters

Batavia IL 60510

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.12	0.482	A		-75.1	>0.0 - 0.96	0.02		Bq/sample
Gross beta	0.94	0.827	A		13.7	0.41 - 1.24	0.14		Bq/sample

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

GENE01

General Engineering Laboratories, LLC

Sample ID: MAPEP-05-GrF14

2040 Savage Road

Gross alpha/beta Air Filters

Charleston SC 29407

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.351	0.482	A		-27.2	>0.0 - 0.96	0.016		Bq/sample
Gross beta	0.933	0.827	A		12.8	0.41 - 1.24	0.020	L	Bq/sample

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

HCAL01

Hazards Control Analytical Lab

Sample ID: MAPEP-05-GrF14

Lawrence Livermore National

Gross alpha/beta Air Filters

Livermore CA 94551

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.27	0.482	A		-44.0	>0.0 - 0.96	.04		Bq/sample
Gross beta	1.01	0.827	A		22.1	0.41 - 1.24	.07		Bq/sample

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

ISUP01

ISU - Department of Physics/Health Physics/EAL

Sample ID: MAPEP-05-GrF14

785 S. 8th Ave, Rm 120

Pocatello

ID

83209-8106

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.24	0.482	A		-50.2	>0.0 - 0.96	0.01		Bq/sample
Gross beta	0.98	0.827	A		18.5	0.41 - 1.24	0.03		Bq/sample

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

JAEC99

Radiation Measurements Laboratory

Sample ID: MAPEP-05-GrF14

Jordan Atomic Energy Commission

Gross alpha/beta Air Filters

Amman

00962 6

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.324	0.482	A		-32.8	>0.0 - 0.96	0.016		Bq/sample
Gross beta	0.67	0.827	A		-19.0	0.41 - 1.24	0.1		Bq/sample

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 20% $<$ Bias \leq 30%

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

KSCF01

Kennedy Space Center, HP Laboratory

Sample ID: MAPEP-05-GrF14

CHS-022

Kennedy Space Center FL 32899

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.200	0.482	N	16	-58.5	>0.0 - 0.96			Bq/sample
Gross beta	0.946	0.827	N	16	14.4	0.41 - 1.24			Bq/sample

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

LOCK01

ICP Analytical Laboratories Department

Sample ID: MAPEP-05-GrF14

CH2M-WG Idaho, LLC

Gross alpha/beta Air Filters

Idaho Falls

ID

83415-5210

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.326	0.482	A		-32.4	>0.0 - 0.96	0.013		Bq/sample
Gross beta	0.860	0.827	A		4.0	0.41 - 1.24	0.018	L	Bq/sample

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

LOCK03

RADIATION MEASUREMENTS LABORATORY/AEDL

Sample ID: MAPEP-05-GrF14

INEEL

Idaho Falls

ID

83415-7111

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.32	0.482	A		-33.6	>0.0 - 0.96	0.04		Bq/sample
Gross beta	1.06	0.827	A		28.2	0.41 - 1.24	0.07		Bq/sample

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

MART02

United States Enrichment Corporation

Sample ID: MAPEP-05-GrF14

5600 Hobbs Road

Gross alpha/beta Air Filters

Paducah

KY

42001-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.663	0.482	A		37.6	>0.0 - 0.96	0.243	H	Bq/sample
Gross beta	0.445	0.827	A		-46.2	0.41 - 1.24	0.0366		Bq/sample

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

MART03

Radioactive Material Analysis Laboratory

Sample ID: MAPEP-05-GrF14

ORNL

Oak Ridge

TN

37831-6043

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.26	0.482	A		-46.1	>0.0 - 0.96	0.03		Bq/sample
Gross beta	0.94	0.827	A		13.7	0.41 - 1.24	0.09		Bq/sample

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

MDPH01

MDPH-Radiation Control Program

Sample ID: MAPEP-05-GrF14

MERL-Room 002

Jamaica Plain

MA

02130-3597

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.31	0.482	A		-35.7	>0.0 - 0.96	0.02		Bq/sample
Gross beta	0.93	0.827	A		12.5	0.41 - 1.24	0.03		Bq/sample

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 20% $<$ Bias \leq 30%

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

NARL01

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.58	0.482	A		20.3	>0.0 - 0.96	0.08		Bq/sample
Gross beta	0.928	0.827	A		12.2	0.41 - 1.24	0.048		Bq/sample

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

NES101

BWXT Services-Nuclear Environmental Laboratory Servi

Sample ID: MAPEP-05-GrF14

Lynchburg Technology Center

Gross alpha/beta Air Filters

Lynchburg

VA

24504-5447

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.462	0.482	A		-4.1	>0.0 - 0.96	0.043		Bq/sample
Gross beta	0.834	0.827	A		0.8	0.41 - 1.24	0.022	L	Bq/sample

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 20% $<$ Bias \leq 30%

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

NJDH01

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.291	0.482	A		-39.6	>0.0 - 0.96	0.029		Bq/sample
Gross beta	0.897	0.827	A		8.5	0.41 - 1.24	0.054		Bq/sample

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

NTSIO1

Nuclear Technology Services, Inc.

Sample ID: MAPEP-05-GrF14

635 Hembree Parkway

Gross alpha/beta Air Filters

Roswell

GA

30076

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.551	0.482	A		14.3	>0.0 - 0.96	0.089		Bq/sample
Gross beta	0.796	0.827	A		-3.7	0.41 - 1.24	0.040		Bq/sample

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 20% $<$ Bias \leq 30%

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

OBGL01

O'Brien & Gere Laboratories, Inc.

Sample ID: MAPEP-05-GrF14

PO Box 4873

Gross alpha/beta Air Filters

Syracuse

NY

13221-4873

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.245	0.482	A		-49.2	>0.0 - 0.96	0.081	H	Bq/sample
Gross beta	0.748	0.827	A		-9.6	0.41 - 1.24	0.13		Bq/sample

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

ODH101

Ohio Department of Health Laboratory
1571 Perry St
Columbus OH 43201

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.458	0.482	A		-5.0	>0.0 - 0.96	0.02		Bq/sample
Gross beta	1.003	0.827	A		21.3	0.41 - 1.24	0.018	L	Bq/sample

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

ORIS01

ORISE/ESSAP

Sample ID: MAPEP-05-GrF14

PO Box 117

Gross alpha/beta Air Filters

Oak Ridge

TN

37831-0117

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.20	0.482	A		-58.5	>0.0 - 0.96	0.01		Bq/sample
Gross beta	0.76	0.827	A		-8.1	0.41 - 1.24	0.02	L	Bq/sample

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

OTLI01

Outreach Technologies, Inc.

Sample ID: MAPEP-05-GrF14

311 N. Aspen

Broken Arrow

OK

74012-

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.040	0.482	N	17	-91.7	>0.0 - 0.96	.021	H	Bq/sample
Gross beta	0.821	0.827	A		-0.7	0.41 - 1.24	.09		Bq/sample

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

PBRF01

NASA Plum Brook Reactor Facility Lab

Sample ID: MAPEP-05-GrF14

6100 Columbus Ave

Gross alpha/beta Air Filters

Sandusky OH 44870

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.2783	0.482	N	17	-42.3	>0.0 - 0.96	1.38	H	Bq/sample
Gross beta	1.1114	0.827	N	17	34.4	0.41 - 1.24	2.78	H	Bq/sample

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

QUAN01

STL St. Louis

Sample ID: MAPEP-05-GrF14

13715 Rider Trail North

Earth City

MO

63045-

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.240	0.482	A		-50.2	>0.0 - 0.96	0.020		Bq/sample
Gross beta	0.914	0.827	A		10.5	0.41 - 1.24	0.052		Bq/sample

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

QUAN03

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.105	0.482	A		-78.2	>0.0 - 0.96	0.0155		Bq/sample
Gross beta	0.887	0.827	A		7.3	0.41 - 1.24	0.0804		Bq/sample

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

RECC01

GEL Laboratories of Ohio, LLC

Sample ID: MAPEP-05-GrF14

6954 Cornell Road

Cincinnati

OH

45242-3025

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	.326	0.482	A		-32.4	>0.0 - 0.96	.0153		Bq/sample
Gross beta	.788	0.827	A		-4.7	0.41 - 1.24	.0469		Bq/sample

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

RPSC01

Radiation Protection Service

Sample ID: MAPEP-05-GrF14

Ontario Ministry of Labour

Gross alpha/beta Air Filters

Weston

Ontario

M9P 3T1

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.22	0.482	A		-54.4	>0.0 - 0.96	0.04		Bq/sample
Gross beta	0.90	0.827	A		8.8	0.41 - 1.24	0.18	H	Bq/sample

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 20% $<$ Bias \leq 30%

N = Result not acceptable Bias $>$ 30%

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%

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

RSAL01

RSA Laboratories, Inc.

Sample ID: MAPEP-05-GrF14

PO Box 61

Gross alpha/beta Air Filters

Hebron

CT

06248

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.053	0.482	A		-89.0	>0.0 - 0.96	.01		Bq/sample
Gross beta	.94	0.827	A		13.7	0.41 - 1.24	.07		Bq/sample

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 20% $<$ Bias \leq 30%

N = Result not acceptable Bias $>$ 30%

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%

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

SAIC01

SAIC On-Site Laboratory

Sample ID: MAPEP-05-GrF14

1805 S. Bannock St.

Gross alpha/beta Air Filters

Denver

CO

80223

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.3607	0.482	A		-25.2	>0.0 - 0.96	0.02599		Bq/sample
Gross beta	0.9071	0.827	A		9.7	0.41 - 1.24	0.0509		Bq/sample

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 20% $<$ Bias \leq 30%

N = Result not acceptable Bias $>$ 30%

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%

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

SCAL01

Sanford Cohen and Associates, Inc.

Sample ID: MAPEP-05-GrF14

1000 Monticello Court

Montgomery AL 36117-

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.335	0.482	A		-30.5	>0.0 - 0.96	0.085	H	Bq/sample
Gross beta	876	0.827	N		105825.0	0.41 - 1.24	131		Bq/sample

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

SEML01

SRS Environmental Monitoring Laboratory

Sample ID: MAPEP-05-GrF14

Bldg 735-B

Aiken

SC

29808

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.25	0.482	A		-48.1	>0.0 - 0.96	0.026		Bq/sample
Gross beta	0.76	0.827	A		-8.1	0.41 - 1.24	0.037		Bq/sample

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

SLDL01

Scientific Laboratory Division

Sample ID: MAPEP-05-GrF14

PO Box 4700

Albuquerque

NM

87196-4700

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.524	0.482	A		8.7	>0.0 - 0.96	0.084		Bq/sample
Gross beta	0.777	0.827	A		-6.0	0.41 - 1.24	0.119		Bq/sample

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

SOUT01

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.572	0.482	A		18.7	>0.0 - 0.96	0.0541		Bq/sample
Gross beta	0.815	0.827	A		-1.5	0.41 - 1.24	0.0579		Bq/sample

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

SRPD01

Sandia National Laboratories, Radiation Protection Sam

Sample ID: MAPEP-05-GrF14

PO Box 5800, MS0305

Albuquerque

NM

87185-0305

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.552	0.482	A		14.5	>0.0 - 0.96	0.11		Bq/sample
Gross beta	0.700	0.827	A		-15.4	0.41 - 1.24	0.14		Bq/sample

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 20% $<$ Bias \leq 30%

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

TDHL01

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.607	0.482	A		25.9	>0.0 - 0.96	0.044		Bq/sample
Gross beta	0.936	0.827	A		13.2	0.41 - 1.24	0.030		Bq/sample

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

TELE01

TELEDYNE BROWN ENGINEERING - ENVIRONMENT

Sample ID: MAPEP-05-GrF14

2508 Quality Lane

Knoxville

TN

37931-6819

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	3.04E-01	0.482	A		-36.9	>0.0 - 0.96	4.42E-02		Bq/sample
Gross beta	8.58E-01	0.827	A		3.7	0.41 - 1.24	5.59E-02		Bq/sample

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

TELE02

Environmental, Inc., Midwest Lab

Sample ID: MAPEP-05-GrF14

700 Landwehr Road

Northbrook IL 60062-

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.30	0.482	A		-37.8	>0.0 - 0.96	0.04		Bq/sample
Gross beta	0.97	0.827	A		17.3	0.41 - 1.24	0.06		Bq/sample

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

TMAEOI

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

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.262	0.482	A		-45.6	>0.0 - 0.96	0.027		Bq/sample
Gross beta	0.809	0.827	A		-2.2	0.41 - 1.24	0.067		Bq/sample

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

TMA001

EBERLINE SERVICES OAK RIDGE LABORATORY

Sample ID: MAPEP-05-GrF14

601 SCARBORO RD

OAK RIDGE TN 37830-

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.365	0.482	A		-24.3	>0.0 - 0.96	0.012		Bq/sample
Gross beta	1.088	0.827	A		31.6	0.41 - 1.24	0.016	L	Bq/sample

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

TMAR01

Eberline Services

2030 Wright Ave

Richmond

CA

94804-0040

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.99	0.482	N		105.4	>0.0 - 0.96	0.112		Bq/sample
Gross beta	0.833	0.827	A		0.7	0.41 - 1.24	0.065		Bq/sample

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 20% $<$ Bias \leq 30%
 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%
 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

TNUT01

FUSRAP

Sample ID: MAPEP-05-GrF14

8945 LATTY AVE

Gross alpha/beta Air Filters

BERKELEY

MO

63134-

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.255	0.482	A		-47.1	>0.0 - 0.96	0.016		Bq/sample
Gross beta	1.038	0.827	A		25.5	0.41 - 1.24	0.038		Bq/sample

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

WEST03

Waste Sampling and Characterization Facility

Sample ID: MAPEP-05-GrF14

PO Box 1000, S3-30

Richland

WA

99352

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.285	0.482	A		-40.9	>0.0 - 0.96	0.023		Bq/sample
Gross beta	0.906	0.827	A		9.6	0.41 - 1.24	0.035		Bq/sample

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

WEST04

PACE ANALYTICAL SERVICES WALTZ MILL SITE

Sample ID: MAPEP-05-GrF14

P.O. BOX 158

MADISON

PA

15663-0158

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.288	0.482	A		-40.2	>0.0 - 0.96	0.020		Bq/sample
Gross beta	0.913	0.827	A		10.4	0.41 - 1.24	0.026	L	Bq/sample

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

WIPP01

WIPP Laboratories
1400 University Drive
Carlsbad NM 88220

Sample ID: MAPEP-05-GrF14

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	2.57e-1	0.482	A		-46.7	>0.0 - 0.96	3.36e-2		Bq/sample
Gross beta	7.61e-1	0.827	A		-8.0	0.41 - 1.24	8.15e-2		Bq/sample

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

WSHLO1

Wisconsin State Laboratory of Hygiene

Sample ID: MAPEP-05-GrF14

2601 Agriculture Drive

Gross alpha/beta Air Filters

Madison

WI

53718

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.7	0.482	A		45.2	>0.0 - 0.96	0.1		Bq/sample
Gross beta	0.7	0.827	A		-15.4	0.41 - 1.24	0.1		Bq/sample

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

WVDP01

WVDP Environmental Laboratory

Sample ID: MAPEP-05-GrF14

10282 Rock Springs Road

West Valley NY 14171

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.204	0.482	A		-57.7	>0.0 - 0.96	.00725		Bq/sample
Gross beta	0.899	0.827	A		8.7	0.41 - 1.24	0.0133	L	Bq/sample

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

WVPL01

WVDP Radiation Protection Lab

Sample ID: MAPEP-05-GrF14

10282 Rock Springs Rd

West Valley

NY

14171

Gross alpha/beta Air Filters

Analyte	Result	Ref Value	Flag	Flag Text	Bias (%)	Acceptance Range	Unc Value	Unc. Flag	Units
Gross alpha	0.211	0.482	A		-56.2	>0.0 - 0.96	0.015		Bq/sample
Gross beta	0.818	0.827	A		-1.1	0.41 - 1.24	0.024	L	Bq/sample

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:

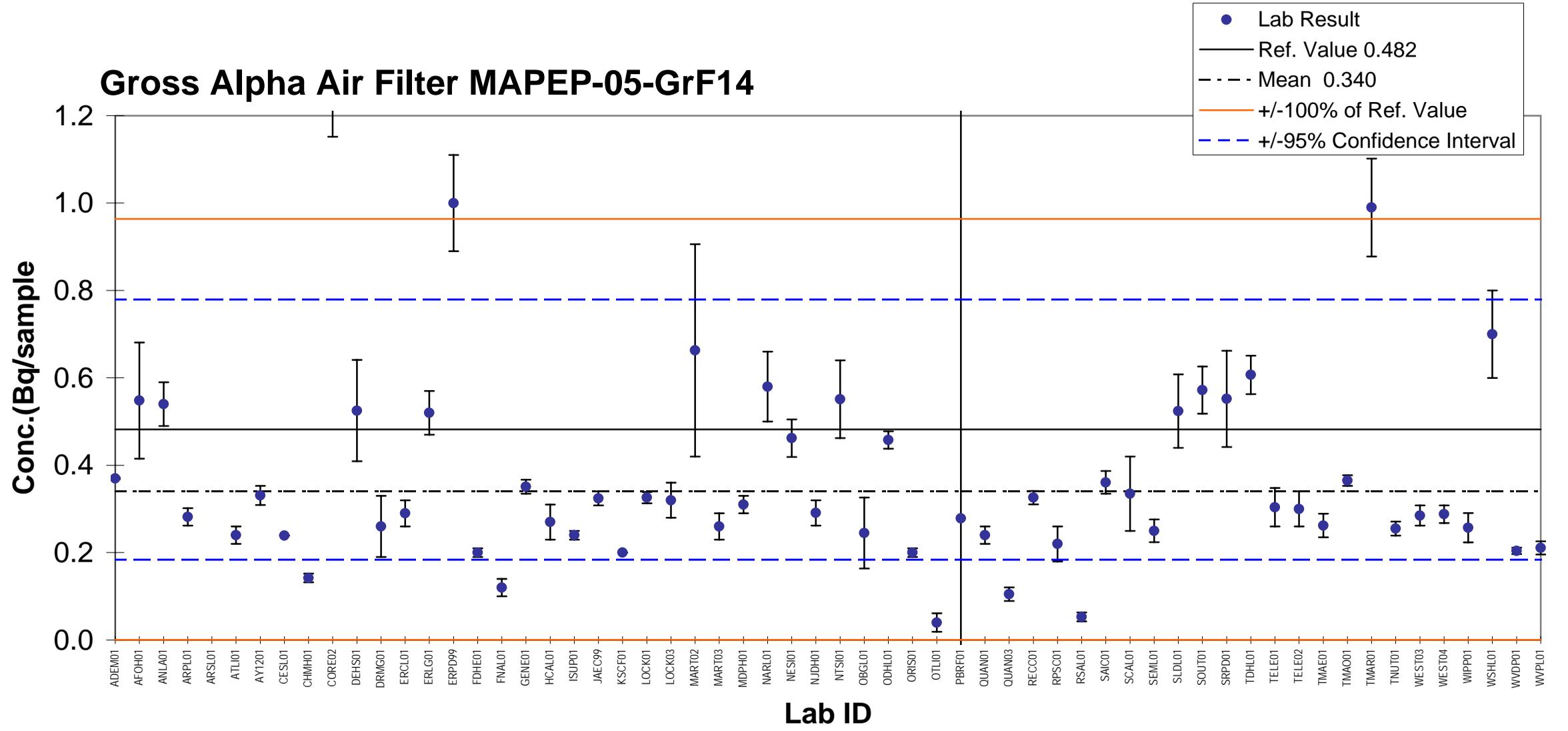
A = Result acceptable
 W = Result acceptable with warning
 N = Result not acceptable
 L = Uncertainty potentially too low
 H = Uncertainty potentially too high
 Q = Participant should evaluate reported value
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

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
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 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 Air Filter MAPEP-05-GrF14



Gross Beta Air Filter MAPEP-05-GrF14

