

XaW25 Participating Laboratories

<b>Lab Code</b>	<b>Lab Name</b>	<b>Num Samples</b>
ANTE01	ALS Environmental	1
AY1201	B&W Y-12, Analytical Chemistry Organization Laboratory	1
CDHS01	California Department of Public Health	1
DEHS01	Department of Environmental Health & Safety	1
DRMG01	B&W Pantex - D&RMG	1
ERCL01	Washington State Public Health Laboratories	1
ETTP01	MCL Inc, ETTP	1
EULC01	EnergySolutions, LLC	1
FDHE01	Florida Dept of Health Environmental Laboratory	1
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab	1
GENE01	GEL Laboratories, LLC	1
LAWR01	LAWRENCE BERKELEY NATIONAL LABORATORY	1
NARL01	National Air and Radiation Environmental Laboratory	1
NARL02	USEPA - NAREL - MERL	1
NESI01	B&W Technical Services-Radioisotope & Analytical Chemistry Laborato	1
ORIS01	ORISE/IEAV	1
OTLI01	Outreach Technologies, Inc.	1
QUAN01	TestAmerica St. Louis	1
QUAN03	TestAmerica	2
SAVA01	SAVANNAH RIVER NUCLEAR SOLUTIONS (SRNS)	1
SEML01	SRS Environmental Monitoring Laboratory	1
SOUT01	Southwest Research Institute	1
SRPD01	Sandia National Laboratories, Radiation Protection Sample Diagnostics	1
TELE02	Environmental, Inc., Midwest Lab	1
TMAO01	EBERLINE SERVICES OAK RIDGE LABORATORY	1
TMAR01	Eberline Analytical Corp. Richmond CA Lab	1
WSHL01	Wisconsin State Laboratory of Hygiene	1

## OrS25 Participating Laboratories

<b>Lab Code</b>	<b>Lab Name</b>	<b>Num Samples</b>
ANTE01	ALS Environmental	1
AY1201	B&W Y-12, Analytical Chemistry Organization Laboratory	1
BCLI01	BC Laboratories, Inc	1
CORE02	TestAmerica Denver	1
DAFI01	Davis & Floyd, Inc.	1
DPAL01	S&S Onsite Analytical, Ltd.	1
EMAX01	EMAX Laboratories, Inc	1
GENE01	GEL Laboratories, LLC	1
MART01	Fluor B&W Ports Analytical Laboratory	1
MART02	United States Enrichment Corporation	2
MLIL01	Microbac Laboratories, Inc	1
NARL01	National Air and Radiation Environmental Laboratory	1
QUAN01	TestAmerica St. Louis	1
QUAN02	TestAmerica Knoxville	1
SOUT01	Southwest Research Institute	1
WEST01	Lionville Laboratory	1
WEST03	Waste Sampling and Characterization Facility, MSA	1

## XaW25 Reference Values

<b>Analyte Name</b>	<b>Calc Ref Value</b>	<b>Uncertainty</b>	<b>False Pos</b>	<b>Sens Eval</b>	<b>Rad Reference Date</b>
Iodine-129	9.5	0.10			8/1/11 12:00 PM

## Sample Statistical Summary

MAPEP-11-XaW25

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Radiological							Units: (Bq/L)
Iodine-129	27	16	9.4	1.5	9.5	0.1	6.7 - 12.4

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

### Other Flags:

A = Result acceptable Bias  $\leq 20\%$   
 W = Result acceptable with warning  $20\% < \text{Bias} < 30\%$   
 N = Result not acceptable Bias  $> 30\%$   
 L = Uncertainty potentially too low (for information purposes only)  
 H = Uncertainty potentially too high (for information purposes only)  
 RW = Report Warning  
 NR = Not Reported

# Flag Summary Report

Generated January 23, 2012

MAPEP-11-XaW25

Radiological			
Analyte	A	W	N
Iodine-129	11	5	11



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

*Laboratory Results For MAPEP-11-XaW25*

(ANTE01) ALS Environmental

225 Commerce Drive

Fort Collins, CO 80524-1416

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	5.5	9.5	N		-42.1	6.7 - 12.4	1.4	H

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(AY1201) B&W Y-12, Analytical Chemistry Organization Laboratory

Y12, NSC, Bldg. 9995, Rm 142

Oak Ridge, TN 37831-8189

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	13.9	9.5	N		46.3	6.7 - 12.4	2.9	H

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (CDHS01) California Department of Public Health  
 Drinking Water & Radiation Lab.  
 Richmond, CA 94804-6403

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	9.70	9.5	A		2.1	6.7 - 12.4	0.48	

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (DEHS01) Department of Environmental Health & Safety  
 North Carolina State Univ.  
 Raleigh, NC 27695-8007

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	-6.7	9.5	N		-170.5	6.7 - 12.4	7.5	L

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(DRMG01) B&W Pantex - D&RMG

Bldg 12-122

Amarillo, TX 79120-0020

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	9.85E+00	9.5	A		3.7	6.7 - 12.4	2.16E+00	H

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (ERCL01) Washington State Public Health Laboratories  
 1610 N.E. 150 th Srteet  
 Shoreline, WA 98155-9701

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	7.18	9.5	W		-24.4	6.7 - 12.4	0.11	L

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(ETTP01) MCL Inc, ETTP

Bldg K1006

Oak Ridge, TN 37830

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	11.9	9.5	W		25.3	6.7 - 12.4	4.5	H

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (EULC01) EnergySolutions, LLC  
 I-80, Exit 46  
 Clive, UT 84029

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	4.095	9.5	N		-56.9	6.7 - 12.4	.424	

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (FDHE01) Florida Dept of Health Environmental Laboratory  
 PO Box 680069  
 Orlando, FL 32868-0069

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	11.667	9.5	W		22.8	6.7 - 12.4	0.904	

Radiological Reference Date: August 1, 2011

Other Flags:

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

*Laboratory Results For MAPEP-11-XaW25*

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

PO Box 680069

Orlando, FL 32868-0069

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	11.859	9.5	W		24.8	6.7 - 12.4	3.46	H

*Radiological Reference Date: August 1, 2011*

Other Flags:

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

*Laboratory Results For MAPEP-11-XaW25*

(GENE01) GEL Laboratories, LLC

2040 Savage Road

Charleston, SC 29407

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	8.723	9.5	A		-8.2	6.7 - 12.4	0.231	L

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

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

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	28.8	9.5	N		203.2	6.7 - 12.4	3.6	

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*  
 (NARL01) National Air and Radiation Environmental Laboratory  
 540 S. Morris Ave.  
 Montgomery, AL 36115-2601

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	9.18	9.5	A		-3.4	6.7 - 12.4	0.56	

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(NARL02) USEPA - NAREL - MERL

540 S Morris Ave

Montgomery, AL 36115

**Radiological** Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	7.7	9.5	A		-18.9	6.7 - 12.4	0.33	

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(NESI01) B&W Technical Services-Radioisotope & Analytical Chemistry Laboratory

Lynchburg Technology Center

Lynchburg, VA 24504-5447

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	2.74	9.5	N		-71.2	6.7 - 12.4	0.72	H

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(ORIS01) ORISE/IEAV

PO Box 117

Oak Ridge, TN 37831-0117

**Radiological** Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	8.87	9.5	A		-6.6	6.7 - 12.4	0.40	

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(OTLI01) Outreach Technologies, Inc.

311 N. Aspen

Broken Arrow, OK 74012-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	10.8	9.5	A		13.7	6.7 - 12.4	8.7	H

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(QUAN01) TestAmerica St. Louis

13715 Rider Trail North

Earth City, MO 63045-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	5.98	9.5	N		-37.1	6.7 - 12.4	0.231	

*Radiological Reference Date: August 1, 2011*

Other Flags:

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

Laboratory Results For MAPEP-11-XaW25

(QUAN03) TestAmerica  
 2800 GEORGE WASHINGTON WAY  
 RICHLAND, WA 99354-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	6.52	9.5	N		-31.4	6.7 - 12.4	0.339	

Radiological Reference Date: August 1, 2011

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

Laboratory Results For MAPEP-11-XaW25  
 (SAVA01) SAVANNAH RIVER NUCLEAR SOLUTIONS (SRNS)  
 Savannah River National Laboratory (SRNL)  
 AIKEN, SC 29808-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	6.60E+00	9.5	N		-30.5	6.7 - 12.4	3.62E-01	

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (SEML01) SRS Environmental Monitoring Laboratory  
 Bldg 735-B  
 Aiken, SC 29808

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	9.29	9.5	A		-2.2	6.7 - 12.4	0.62	

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (SOUT01) Southwest Research Institute  
 6220 Culebra Rd.  
 San Antonio, TX 78228-0510

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	8.11	9.5	A		-14.6	6.7 - 12.4	0.367	

*Radiological Reference Date: August 1, 2011*

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

*Laboratory Results For MAPEP-11-XaW25*

(SRPD01) Sandia National Laboratories, Radiation Protection Sample Diagnostics

PO Box 5800, MS1103

Albuquerque, NM 87185-1103

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	17.43	9.5	N		83.5	6.7 - 12.4	13.8	H

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (TELE02) Environmental, Inc., Midwest Lab  
 700 Landwehr Road  
 Northbrook, IL 60062-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	7.32	9.5	W		-22.9	6.7 - 12.4	0.30	

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (TMAO01) EBERLINE SERVICES OAK RIDGE LABORATORY  
 601 SCARBORO RD  
 OAK RIDGE, TN 37830-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	10.1	9.5	A		6.3	6.7 - 12.4	0.624	

*Radiological Reference Date: August 1, 2011*

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

Laboratory Results For MAPEP-11-XaW25  
 (TMAR01) Eberline Analytical Corp. Richmond CA Lab  
 2030 Wright Ave  
 Richmond, CA 94804-3849

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	8.67	9.5	A		-8.7	6.7 - 12.4	1.56	

*Radiological Reference Date: August 1, 2011*

Other Flags:

- A = Result acceptable Bias  $\leq 20\%$
- W = Result acceptable with warning  $20\% < \text{Bias} < 30\%$
- N = Result not acceptable Bias  $> 30\%$
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- RW = Report Warning
- NR = Not Reported



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

Laboratory Results For MAPEP-11-XaW25  
 (WSHL01) Wisconsin State Laboratory of Hygiene  
 2601 Agriculture Drive  
 Madison, WI 53718

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Iodine-129	59.9	9.5	N		530.5	6.7 - 12.4	3.24	

Radiological Reference Date: August 1, 2011

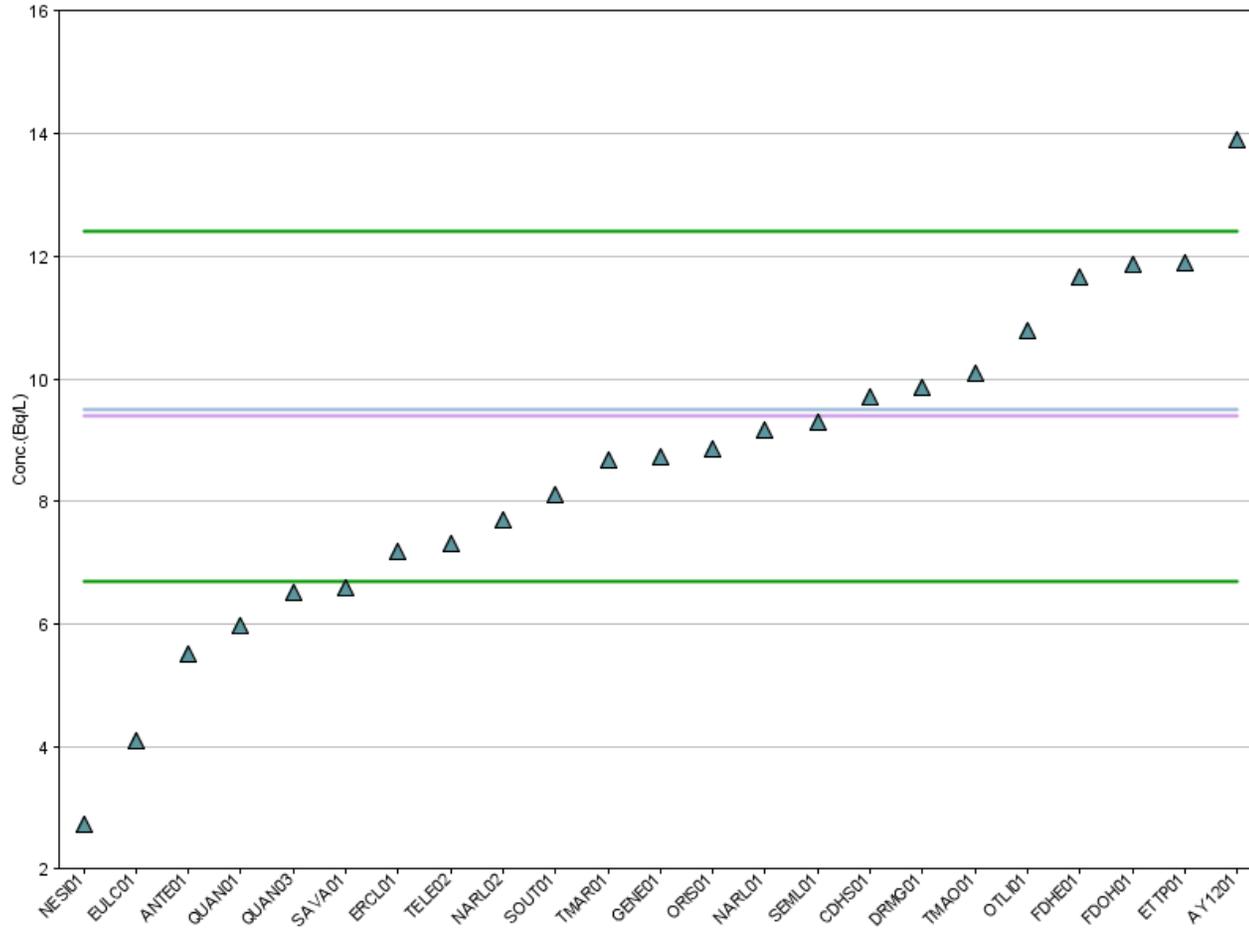
Other Flags:

- A = Result acceptable Bias  $\leq 20\%$
- W = Result acceptable with warning  $20\% < \text{Bias} < 30\%$
- N = Result not acceptable Bias  $> 30\%$
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- RW = Report Warning
- NR = Not Reported

# Iodine-129

## MAPEP-11-XaW25

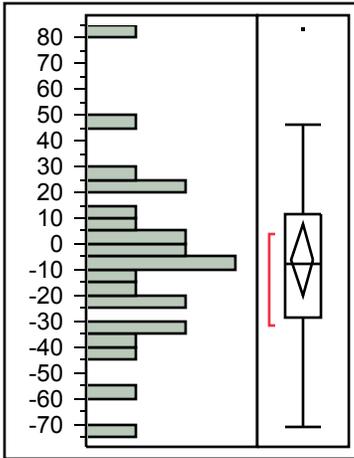
Ref. Value 9.5 Mean 9.4 Acc. Range



Note: This chart shows only data points with values between 1.90 and 16.90 ( $\pm 5$  Standard Deviations)

**Distributions**

**Bias**



**Quantiles**

100.0%	maximum	83.5
99.5%		83.5
97.5%		83.5
90.0%		35.8
75.0%	quartile	11.85
50.0%	median	-7.4
25.0%	quartile	-28.975
10.0%		-49.5
2.5%		-71.2
0.5%		-71.2
0.0%	minimum	-71.2

**Moments**

Mean	-6.275
Std Dev	33.268659
Std Err Mean	6.7909367
Upper 95% Mean	7.7731228
Lower 95% Mean	-20.32312
N	24