RESL CUSTOMER EXPORT CONTROL AGREEMENT

It is the Radiological and Environmental Sciences Laboratory's (RESL) policy to conduct business in accordance with all applicable U.S. export control laws and regulations. It is also RESL's policy that its Customers comply with U.S. export control laws and regulations. Therefore, Customer agrees to the following:

1. Because products, technical data, and technical assistance (i.e., services) provided to Customer by RESL may be subject to U.S. export control laws and regulations, (i) transactions with certain persons and companies and (ii) the export or reexport of certain types and levels of products, technical data, and services are prohibited or restricted.

2. Customer acknowledges that it is responsible for its own compliance with U.S. export control laws and regulations. Customer further agrees that it assumes the responsibility to obtain all necessary U.S. export licenses or other U.S. governmental authorizations, as well as all liability for the failure to do so.

3. Customer acknowledges that export control requirements may change and that the export or reexport of RESL products, technical data, and services without an export license or other appropriate governmental authorization may result in criminal and/or civil liability.

4. The obligations and requirements described herein shall survive the expiration or termination of any agreement or contract between RESL and Customer.

Query Results
Generated November 13, 2012

	Lab Code	Lab Name
1	ANTE01	ALS Environmental
2	AY1201	B&W Y-12, Analytical Chemistry Organization Laboratory
3	BCLI01	BC Laboratories, Inc
4	CORE02	TestAmerica Denver
5	DAFI01	Davis & Floyd, Inc.
6	DPAL01	S&S Onsite Analytical, Ltd.
7	EMAX01	EMAX Laboratories, Inc
8	GENE01	GEL Laboratories, LLC
9	MART02	United States Enrichment Corporation
10	MLIL01	Microbac Laboratories, Inc
11	QUAN01	TestAmerica St. Louis
12	QUAN02	TestAmerica Knoxville
13	SOUT01	Southwest Research Institute
14	WEST01	Lionville Laboratory
15	WEST03	Waste Sampling and Characterization Facility, MSA

Mixed Analyte Performance Evaluation Program

Setup and Process Data

MAPEP-12-OrS27

Analyte	Ref. Value	Total Ref.	Uncertainty	F.P.	S.E.
Organic					
Aldrin	50			✔	
delta-BHC	50			✔	
alpha-BHC	359	359	2		
beta-BHC	394	394	6		
gamma-BHC (Lindane)	50			✔	
alpha Chlordane	50			✔	
gamma Chlordane	50			✔	
4,4'-DDD	233	233	1		
4,4'-DDE	220	220	2		
4,4'-DDT	50			✔	
Dieldrin	50			✔	
Endosulfan I	217	217	4		
Endosulfan II	199	199	2		
Endosulfan sulfate	605	605	2		
Endrin Aldehyde	284	284	3		
Endrin Ketone	50			✔	
Endrin	50			✔	
Heptachlor	315	315	2		
Heptachlor epoxide	50			✔	
Methoxychlor	50			✔	
1,2-Dichlorobenzene	1500			✔	
1,3-Dichlorobenzene	3150	3150	50		
1,4-Dichlorobenzene	2160	2160	37		
Hexachlorobutadiene	2420	2420	43		
Hexachloroethane	4620	4620	37		
Naphthalene	5797	5797	127		
Nitrobenzene	6087	6087	83		
1,2,4-Trichlorobenzene	2600	2600	47		
Acenaphthene	1000			✔	
Acenaphthylene	1000			✔	
Anthracene	2910	2910	47		
Benzo(a)anthracene	1413	1413	33		
Benzo(a)pyrene	1000			✔	
Benzo(b)fluoranthene	1000			✔	
Benzo(g,h,i)perylene	1000			✔	
Benzo(k)fluoranthene	1000			✔	
4-Bromophenyl-phenylether	5310	5310	93		
Butylbenzylphthalate	4300	4300	153		
4-Chloro-3-methylphenol	2690	2690	98		
bis(2-chloroethoxy)methane	3040	3040	47		
bis(2-chloroethyl)ether	2137	2137	30		
bis(2-chloroisopropyl)ether	1500			✔	
2-Chloronaphthalene	1000			✔	
2-Chlorophenol	4597	4597	80		
4-Chlorophenyl-phenylether	6460	6460	157		
Chrysene	1000			✔	
Dibenzo(a,h)anthracene	1000			✔	
Dibenzofuran	1500			✔	
Di-n-butylphthalate	2333	2333	60		

2,4-Dichlorophenol	5763	5763	100	
Bis(2-ethylhexyl)phthalate	1500			✔
Diethylphthalate	2830	2830	60	
Dimethylphthalate	5379	5379	107	
2,4-Dinitrophenol	600			✔
2,4-Dinitrotoluene	4137	4137	130	
2,6-Dinitrotoluene	6347	6347	157	
Di-n-octylphthalate	1500			✔
Fluoranthene	3073	3073	53	
Fluorene	1000			✔
Hexachlorobenzene	1653	1653	37	
Indeno(1,2,3-c,d)pyrene	1000			✔
Isophorone	4467	4467	67	
2-Methylnaphthalene	1000			✔
2-Methylphenol	4113	4113	103	
4-Methylphenol	1000			✔
2-Nitrophenol	1000			✔
4-Nitrophenol	1000			✔
Pentachlorophenol	2920	2920	209	
Phenanthrene	1000			✔
Phenol	1000			✔
Pyrene	1300	1300	23	
2,4,5-Trichlorophenol	2430	2430	87	
2,4,6-Trichlorophenol	3563	3563	57	

MAPEP Mixed Analyte Performance Evaluation Program

Sample Statistical Summary

MAPEP-12-OrS27

Analyte	T(1)	A(2)	Calc(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Organic							Units: (ug/kg)
4,4'-DDD	11	11	197	42	197	1	72 - 322
4,4'-DDE	11	11	184	38	184	2	70 - 297
4,4'-DDT	10	10			<50		
Aldrin	10	10			<50		
alpha Chlordane	9	9			<50		
alpha-BHC	11	11	313	66	313	2	115 - 511
beta-BHC	11	11	315	78	315	6	80 - 550
delta-BHC	10	10			<50		
Dieldrin	10	10			<50		
Endosulfan I	11	11	163	35	163	4	59 - 268
Endosulfan II	11	11	171	38	171	2	57 - 284
Endosulfan sulfate	11	11	502	121	502	2	139 - 865
Endrin	10	10			<50		
Endrin Aldehyde	10	9	175	50	175	3	23 - 326
Endrin Ketone	9	9			<50		
gamma Chlordane	9	9			<50		
gamma-BHC (Lindane)	10	10			<50		
Heptachlor	11	11	262	56	262	2	95 - 428
Heptachlor epoxide	10	10			<50		
Methoxychlor	10	10			<50		
1,2,4-Trichlorobenzene	15	15	1779	476	1779	47	351 - 3208
1,2-Dichlorobenzene	13	13			<1500		
1,3-Dichlorobenzene	15	15	1806	664	1806	50	181 - 3799
1,4-Dichlorobenzene	15	15	1339	463	1339	37	134 - 2728
2,4,5-Trichlorophenol	15	15	1892	515	1892	87	347 - 3437
2,4,6-Trichlorophenol	15	15	1994	558	1994	57	321 - 3668
2,4-Dichlorophenol	15	15	3952	1017	3952	100	902 - 7003
2,4-Dinitrophenol	13	13			<600		
2,4-Dinitrotoluene	15	15	3083	836	3083	130	574 - 5592
2,6-Dinitrotoluene	15	15	4861	975	4861	157	1936 - 7787
2-Chloronaphthalene	13	13			<1000		
2-Chlorophenol	15	15	2962	789	2962	80	596 - 5329
2-Methylnaphthalene	13	13			<1000		
2-Methylphenol	14	14	747	332	747	103	75 - 1744
2-Nitrophenol	13	13			<1000		
4-Bromophenyl-phenylether	15	15	4274	874	4274	93	1652 - 6896
4-Chloro-3-methylphenol	15	15	1881	520	1881	98	321 - 3440
4-Chlorophenyl-phenylether	15	15	5002	1077	5002	157	1770 - 8234
4-Methylphenol	12	12			<1000		
4-Nitrophenol	13	13			<1000		
Acenaphthene	13	13			<1000		
Acenaphthylene	13	13			<1000		
Anthracene	15	15	2099	499	2099	47	602 - 3596
Benzo(a)anthracene	15	15	1161	261	1161	33	379 - 1943
Benzo(a)pyrene	13	13			<1000		
Benzo(b)fluoranthene	13	13			<1000		
Benzo(g,h,i)perylene	13	13			<1000		
Benzo(k)fluoranthene	13	13			<1000		
bis(2-chloroethoxy)methane	15	15	2149	552	2149	47	493 - 3806
bis(2-chloroethyl)ether	15	15	1478	493	1478	30	148 - 2956

bis(2-chloroisopropyl)ether	12	12			<1500		
Bis(2-ethylhexyl)phthalate	13	9			<1500		
Butylbenzylphthalate	15	15	3537	852	3537	153	981 - 6094
Chrysene	14	13			<1000		
Di-n-butylphthalate	15	15	2092	566	2092	60	394 - 3790
Di-n-octylphthalate	13	13			<1500		
Dibenzo(a,h)anthracene	13	13			<1000		
Dibenzofuran	13	13			<1500		
Diethylphthalate	15	15	2159	564	2159	60	467 - 3852
Dimethylphthalate	15	15	4221	915	4221	107	1476 - 6967
Fluoranthene	15	15	2521	509	2521	53	995 - 4048
Fluorene	13	13			<1000		
Hexachlorobenzene	15	15	1333	284	1333	37	481 - 2184
Hexachlorobutadiene	15	15	1626	457	1626	43	255 - 2996
Hexachloroethane	15	15	2691	906	2691	37	269 - 5410
Indeno(1,2,3-c,d)pyrene	13	13			<1000		
Isophorone	15	15	3054	696	3054	67	967 - 5141
Naphthalene	15	15	3932	928	3932	127	1148 - 6716
Nitrobenzene	15	15	4287	1094	4287	83	1006 - 7568
Pentachlorophenol	15	15	2011	829	2011	209	201 - 4497
Phenanthrene	13	13			<1000		
Phenol	13	13			<1000		
Pyrene	15	15	1067	231	1067	23	373 - 1760

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".

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

MAPEP Mixed Analyte Performance Evaluation Program

Flag Summary Report

Study: MAPEP-12-OrS27: Semi-volatile organics soil analysis

Organic

Analyte	A	W	RW	N
Phenol	13			
2-Chlorophenol	15			
1,3-Dichlorobenzene	15			
1,4-Dichlorobenzene	15			
1,2-Dichlorobenzene	13			
Hexachloroethane	15			
Nitrobenzene	15			
Isophorone	15			
2-Nitrophenol	13			
2,4-Dichlorophenol	15			
1,2,4-Trichlorobenzene	15			
Naphthalene	15			
Hexachlorobutadiene	15			
4-Chloro-3-methylphenol	15			
2-Methylnaphthalene	13			
2-Methylphenol	14			
2,4,6-Trichlorophenol	15			
2-Chloronaphthalene	13			
Dimethylphthalate	15			
Acenaphthylene	13			
2,6-Dinitrotoluene	15			
Acenaphthene	13			
2,4-Dinitrotoluene	15			
2,4-Dinitrophenol	13			
Dibenzofuran	13			
4-Nitrophenol	13			
Fluorene	13			
Diethylphthalate	15			
2,4,5-Trichlorophenol	15			
Hexachlorobenzene	15			
Pentachlorophenol	15			
Phenanthrene	13			
Anthracene	15			
Di-n-butylphthalate	15			
Fluoranthene	15			
Pyrene	15			
Butylbenzylphthalate	15			
Benzo(a)anthracene	15			
Chrysene	13			1
Bis(2-ethylhexyl)phthalate	9			4
Di-n-octylphthalate	13			
Benzo(b)fluoranthene	13			
Benzo(k)fluoranthene	13			
Benzo(a)pyrene	13			
Indeno(1,2,3-c,d)pyrene	13			
Dibenzo(a,h)anthracene	13			
Benzo(g,h,i)perylene	13			
alpha-BHC	11			
beta-BHC	11			
gamma-BHC (Lindane)	10			
delta-BHC	10			

Heptachlor	11	
Aldrin	10	
Heptachlor epoxide	10	
Endosulfan I	11	
4,4'-DDE	11	
Dieldrin	10	
Endrin	10	
4,4'-DDD	11	
Endosulfan II	11	
4,4'-DDT	10	
Endrin Aldehyde	9	1
Endosulfan sulfate	11	
Endrin Ketone	9	
Methoxychlor	10	
4-Bromophenyl-phenylether	15	
bis(2-chloroethoxy)methane	15	
bis(2-chloroethyl)ether	15	
4-Chlorophenyl-phenylether	15	
bis(2-chloroisopropyl)ether	12	
alpha Chlordane	9	
gamma Chlordane	9	
4-Methylphenol	12	

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(ANTE01) ALS Environmental
225 Commerce Drive
Fort Collins, CO 80524-1416

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	199	197	A		0.04	72 - 322		
4,4'-DDE	205	184	A		0.57	70 - 297		
4,4'-DDT	<1.67	<50	A					
Aldrin	<1.67	<50	A					
alpha Chlordane	<1.67	<50	A					
alpha-BHC	365	313	A		0.79	115 - 511		
beta-BHC	432	315	A		1.49	80 - 550		
delta-BHC	<1.67	<50	A					
Dieldrin	<1.67	<50	A					
Endosulfan I	182	163	A		0.54	59 - 268		
Endosulfan II	176	171	A		0.15	57 - 284		
Endosulfan sulfate	598	502	A		0.79	139 - 865		
Endrin	<1.67	<50	A					
Endrin Aldehyde	254	175	A		1.57	23 - 326		
Endrin Ketone	<1.67	<50	A					
gamma Chlordane	<1.67	<50	A					
gamma-BHC (Lindane)	<1.67	<50	A					
Heptachlor	313	262	A		0.92	95 - 428		
Heptachlor epoxide	<1.67	<50	A					
Methoxychlor	<8.33	<50	A					
1,2,4-Trichlorobenzene	1880	1779	A		0.21	351 - 3208		
1,2-Dichlorobenzene	<333	<1500	A					
1,3-Dichlorobenzene	1960	1806	A		0.23	181 - 3799		
1,4-Dichlorobenzene	1420	1339	A		0.18	134 - 2728		
2,4,5-Trichlorophenol	2050	1892	A		0.31	347 - 3437		
2,4,6-Trichlorophenol	2160	1994	A		0.30	321 - 3668		
2,4-Dichlorophenol	4590	3952	A		0.63	902 - 7003		
2,4-Dinitrophenol	<667	<600	A					
2,4-Dinitrotoluene	3290	3083	A		0.25	574 - 5592		
2,6-Dinitrotoluene	5160	4861	A		0.31	1936 - 7787		
2-Chloronaphthalene	<333	<1000	A					
2-Chlorophenol	3300	2962	A		0.43	596 - 5329		
2-Methylnaphthalene	<333	<1000	A					
2-Methylphenol	707	747	A		-0.12	75 - 1744		
2-Nitrophenol	<333	<1000	A					
4-Bromophenyl-phenylether	4670	4274	A		0.45	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2150	1881	A		0.52	321 - 3440		
4-Chlorophenyl-phenylether	5150	5002	A		0.14	1770 - 8234		
4-Methylphenol	NR	<1000						
4-Nitrophenol	<667	<1000	A					
Acenaphthene	<333	<1000	A					
Acenaphthylene	<333	<1000	A					
Anthracene	2350	2099	A		0.50	602 - 3596		
Benzo(a)anthracene	1160	1161	A		0.00	379 - 1943		
Benzo(a)pyrene	<333	<1000	A					
Benzo(b)fluoranthene	<333	<1000	A					
Benzo(g,h,i)perylene	<333	<1000	A					
Benzo(k)fluoranthene	<333	<1000	A					
bis(2-chloroethoxy)methane	2590	2149	A		0.80	493 - 3806		
bis(2-chloroethyl)ether	1650	1478	A		0.35	148 - 2956		
bis(2-chloroisopropyl)ether	<333	<1500	A					
Bis(2-ethylhexyl)phthalate	815	<1500	A					
Butylbenzylphthalate	3720	3537	A		0.21	981 - 6094		
Chrysene	<333	<1000	A					
Di-n-butylphthalate	2430	2092	A		0.60	394 - 3790		
Di-n-octylphthalate	<333	<1500	A					
Dibenzo(a,h)anthracene	<333	<1000	A					
Dibenzofuran	333	<1500	A					
Diethylphthalate	2320	2159	A		0.29	467 - 3852		
Dimethylphthalate	4810	4221	A		0.64	1476 - 6967		
Fluoranthene	2640	2521	A		0.23	995 - 4048		
Fluorene	<333	<1000	A					
Hexachlorobenzene	1460	1333	A		0.45	481 - 2184		
Hexachlorobutadiene	1700	1626	A		0.16	255 - 2996		
Hexachloroethane	2910	2691	A		0.24	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<333	<1000	A					
Isophorone	3640	3054	A		0.84	967 - 5141		
Naphthalene	4340	3932	A		0.44	1148 - 6716		
Nitrobenzene	3890	4287	A		-0.36	1006 - 7568		
Pentachlorophenol	2270	2011	A		0.31	201 - 4497		
Phenanthrene	<333	<1000	A					
Phenol	<333	<1000	A					
Pyrene	1020	1067	A		-0.20	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

MAPEP Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(AY1201) B&W Y-12, Analytical Chemistry Organization Laboratory
Y12, NSC, Bldg. 9995, Rm 142
Oak Ridge, TN 37831-8189

Organic — Units: (ug/kg)

Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	208	197	A		0.26	72 - 322		
4,4'-DDE	193	184	A		0.25	70 - 297		
4,4'-DDT	<2.67	<50	A					
Aldrin	<1.33	<50	A					
alpha Chlordane	<1.33	<50	A					
alpha-BHC	293	313	A		-0.31	115 - 511		
beta-BHC	309	315	A		-0.08	80 - 550		
delta-BHC	<1.33	<50	A					
Dieldrin	<2.67	<50	A					
Endosulfan I	160	163	A		-0.09	59 - 268		
Endosulfan II	194	171	A		0.62	57 - 284		
Endosulfan sulfate	539	502	A		0.31	139 - 865		
Endrin	<2.67	<50	A					
Endrin Aldehyde	554	175	N		7.52	23 - 326		
Endrin Ketone	<2.67	<50	A					
gamma Chlordane	<1.33	<50	A					
gamma-BHC (Lindane)	<1.33	<50	A					
Heptachlor	239	262	A		-0.41	95 - 428		
Heptachlor epoxide	<1.33	<50	A					
Methoxychlor	<13.3	<50	A					
1,2,4-Trichlorobenzene	2360	1779	A		1.22	351 - 3208		
1,2-Dichlorobenzene	<667	<1500	A					
1,3-Dichlorobenzene	2810	1806	A		1.51	181 - 3799		
1,4-Dichlorobenzene	2180	1339	A		1.82	134 - 2728		
2,4,5-Trichlorophenol	2150	1892	A		0.50	347 - 3437		
2,4,6-Trichlorophenol	2090	1994	A		0.17	321 - 3668		
2,4-Dichlorophenol	4710	3952	A		0.75	902 - 7003		
2,4-Dinitrophenol	<333	<600	A					
2,4-Dinitrotoluene	3500	3083	A		0.50	574 - 5592		
2,6-Dinitrotoluene	5800	4861	A		0.96	1936 - 7787		
2-Chloronaphthalene	<333	<1000	A					
2-Chlorophenol	3800	2962	A		1.06	596 - 5329		
2-Methylnaphthalene	<333	<1000	A					
2-Methylphenol	421	747	A		-0.98	75 - 1744		
2-Nitrophenol	<333	<1000	A					
4-Bromophenyl-phenylether	3930	4274	A		-0.39	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2180	1881	A		0.58	321 - 3440		
4-Chlorophenyl-phenylether	5240	5002	A		0.22	1770 - 8234		
4-Methylphenol	<667	<1000	A					
4-Nitrophenol	<667	<1000	A					
Acenaphthene	<333	<1000	A					
Acenaphthylene	<667	<1000	A					
Anthracene	2260	2099	A		0.32	602 - 3596		
Benzo(a)anthracene	1340	1161	A		0.69	379 - 1943		
Benzo(a)pyrene	<333	<1000	A					
Benzo(b)fluoranthene	<333	<1000	A					
Benzo(g,h,i)perylene	<333	<1000	A					
Benzo(k)fluoranthene	<333	<1000	A					
bis(2-chloroethoxy)methane	2960	2149	A		1.47	493 - 3806		
bis(2-chloroethyl)ether	2260	1478	A		1.59	148 - 2956		
bis(2-chloroisopropyl)ether	<333	<1500	A					
Bis(2-ethylhexyl)phthalate	2180	<1500	N					
Butylbenzylphthalate	3510	3537	A		-0.03	981 - 6094		
Chrysene	<333	<1000	A					
Di-n-butylphthalate	2350	2092	A		0.46	394 - 3790		
Di-n-octylphthalate	<333	<1500	A					
Dibenzo(a,h)anthracene	<333	<1000	A					
Dibenzofuran	<333	<1500	A					
Diethylphthalate	2400	2159	A		0.43	467 - 3852		
Dimethylphthalate	4170	4221	A		-0.06	1476 - 6967		
Fluoranthene	2510	2521	A		-0.02	995 - 4048		
Fluorene	<333	<1000	A					
Hexachlorobenzene	1550	1333	A		0.77	481 - 2184		
Hexachlorobutadiene	2150	1626	A		1.15	255 - 2996		
Hexachloroethane	3280	2691	A		0.65	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<333	<1000	A					
Isophorone	3750	3054	A		1.00	967 - 5141		
Naphthalene	4590	3932	A		0.71	1148 - 6716		
Nitrobenzene	5310	4287	A		0.94	1006 - 7568		
Pentachlorophenol	2120	2011	A		0.13	201 - 4497		
Phenanthrene	<333	<1000	A					
Phenol	<333	<1000	A					
Pyrene	1370	1067	A		1.31	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(BCLI01) BC Laboratories, Inc
4100 Atlas Court
Bakersfield, CA 93308

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	142	197	A		-1.33	72 - 322		
4,4'-DDE	232	184	A		1.28	70 - 297		
4,4'-DDT	NR	<50						
Aldrin	NR	<50						
alpha Chlordane	NR	<50						
alpha-BHC	336	313	A		0.35	115 - 511		
beta-BHC	317	315	A		0.03	80 - 550		
delta-BHC	NR	<50						
Dieldrin	NR	<50						
Endosulfan I	212	163	A		1.40	59 - 268		
Endosulfan II	120	171	A		-1.34	57 - 284		
Endosulfan sulfate	445	502	A		-0.47	139 - 865		
Endrin	NR	<50						
Endrin Aldehyde	NR	175				23 - 326		
Endrin Ketone	NR	<50						
gamma Chlordane	NR	<50						
gamma-BHC (Lindane)	NR	<50						
Heptachlor	230	262	A		-0.57	95 - 428		
Heptachlor epoxide	NR	<50						
Methoxychlor	NR	<50						
1,2,4-Trichlorobenzene	1830	1779	A		0.11	351 - 3208		
1,2-Dichlorobenzene	NR	<1500						
1,3-Dichlorobenzene	1990	1806	A		0.28	181 - 3799		
1,4-Dichlorobenzene	1410	1339	A		0.15	134 - 2728		
2,4,5-Trichlorophenol	1200	1892	A		-1.34	347 - 3437		
2,4,6-Trichlorophenol	1490	1994	A		-0.90	321 - 3668		
2,4-Dichlorophenol	3110	3952	A		-0.83	902 - 7003		
2,4-Dinitrophenol	NR	<600						
2,4-Dinitrotoluene	2740	3083	A		-0.41	574 - 5592		
2,6-Dinitrotoluene	5210	4861	A		0.36	1936 - 7787		
2-Chloronaphthalene	NR	<1000						
2-Chlorophenol	2510	2962	A		-0.57	596 - 5329		
2-Methylnaphthalene	NR	<1000						
2-Methylphenol	197	747	A		-1.65	75 - 1744		
2-Nitrophenol	NR	<1000						
4-Bromophenyl-phenylether	4730	4274	A		0.52	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	1450	1881	A		-0.83	321 - 3440		
4-Chlorophenyl-phenylether	5060	5002	A		0.05	1770 - 8234		
4-Methylphenol	NR	<1000						
4-Nitrophenol	NR	<1000						
Acenaphthene	NR	<1000						
Acenaphthylene	NR	<1000						
Anthracene	1960	2099	A		-0.28	602 - 3596		
Benzo(a)anthracene	829	1161	A		-1.27	379 - 1943		
Benzo(a)pyrene	NR	<1000						
Benzo(b)fluoranthene	NR	<1000						
Benzo(g,h,i)perylene	NR	<1000						
Benzo(k)fluoranthene	NR	<1000						
bis(2-chloroethoxy)methane	1910	2149	A		-0.43	493 - 3806		
bis(2-chloroethyl)ether	1520	1478	A		0.09	148 - 2956		
bis(2-chloroisopropyl)ether	NR	<1500						
Bis(2-ethylhexyl)phthalate	NR	<1500						
Butylbenzylphthalate	3130	3537	A		-0.48	981 - 6094		
Chrysene	NR	<1000						
Di-n-butylphthalate	1820	2092	A		-0.48	394 - 3790		
Di-n-octylphthalate	NR	<1500						
Dibenzo(a,h)anthracene	NR	<1000						
Dibenzofuran	NR	<1500						
Diethylphthalate	1740	2159	A		-0.74	467 - 3852		
Dimethylphthalate	3840	4221	A		-0.42	1476 - 6967		
Fluoranthene	3160	2521	A		1.26	995 - 4048		
Fluorene	NR	<1000						
Hexachlorobenzene	1340	1333	A		0.03	481 - 2184		
Hexachlorobutadiene	1510	1626	A		-0.25	255 - 2996		
Hexachloroethane	2960	2691	A		0.30	269 - 5410		
Indeno(1,2,3-c,d)pyrene	NR	<1000						
Isophorone	2680	3054	A		-0.54	967 - 5141		
Naphthalene	4420	3932	A		0.53	1148 - 6716		
Nitrobenzene	4860	4287	A		0.52	1006 - 7568		
Pentachlorophenol	1110	2011	A		-1.09	201 - 4497		
Phenanthrene	NR	<1000						
Phenol	NR	<1000						
Pyrene	810	1067	A		-1.11	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(CORE02) TestAmerica Denver
4955 Yarrow St
Arvada, CO 80002

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	169	197	A		-0.68	72 - 322		
4,4'-DDE	169	184	A		-0.39	70 - 297		
4,4'-DDT	<1.63	<50	A					
Aldrin	<1.63	<50	A					
alpha Chlordane	NR	<50						
alpha-BHC	289	313	A		-0.37	115 - 511		
beta-BHC	300	315	A		-0.19	80 - 550		
delta-BHC	<1.63	<50	A					
Dieldrin	<1.63	<50	A					
Endosulfan I	158	163	A		-0.15	59 - 268		
Endosulfan II	166	171	A		-0.12	57 - 284		
Endosulfan sulfate	473	502	A		-0.24	139 - 865		
Endrin	<1.63	<50	A					
Endrin Aldehyde	158	175	A		-0.33	23 - 326		
Endrin Ketone	NR	<50						
gamma Chlordane	NR	<50						
gamma-BHC (Lindane)	<1.63	<50	A					
Heptachlor	258	262	A		-0.07	95 - 428		
Heptachlor epoxide	<1.63	<50	A					
Methoxychlor	<3.16	<50	A					
1,2,4-Trichlorobenzene	1890	1779	A		0.23	351 - 3208		
1,2-Dichlorobenzene	<330	<1500	A					
1,3-Dichlorobenzene	1880	1806	A		0.11	181 - 3799		
1,4-Dichlorobenzene	1360	1339	A		0.05	134 - 2728		
2,4,5-Trichlorophenol	1960	1892	A		0.13	347 - 3437		
2,4,6-Trichlorophenol	2080	1994	A		0.15	321 - 3668		
2,4-Dichlorophenol	4290	3952	A		0.33	902 - 7003		
2,4-Dinitrophenol	<1600	<600	A	(19)				
2,4-Dinitrotoluene	3330	3083	A		0.30	574 - 5592		
2,6-Dinitrotoluene	5170	4861	A		0.32	1936 - 7787		
2-Chloronaphthalene	<330	<1000	A					
2-Chlorophenol	3010	2962	A		0.06	596 - 5329		
2-Methylnaphthalene	<330	<1000	A					
2-Methylphenol	913	747	A		0.50	75 - 1744		
2-Nitrophenol	<330	<1000	A					
4-Bromophenyl-phenylether	5080	4274	A		0.92	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2080	1881	A		0.38	321 - 3440		
4-Chlorophenyl-phenylether	5780	5002	A		0.72	1770 - 8234		
4-Methylphenol	<330	<1000	A					
4-Nitrophenol	<1600	<1000	A	(19)				
Acenaphthene	<330	<1000	A					
Acenaphthylene	<330	<1000	A					
Anthracene	2470	2099	A		0.74	602 - 3596		
Benzo(a)anthracene	1240	1161	A		0.30	379 - 1943		
Benzo(a)pyrene	<330	<1000	A					
Benzo(b)fluoranthene	<330	<1000	A					
Benzo(g,h,i)perylene	<330	<1000	A					
Benzo(k)fluoranthene	<330	<1000	A					
bis(2-chloroethoxy)methane	2060	2149	A		-0.16	493 - 3806		
bis(2-chloroethyl)ether	1390	1478	A		-0.18	148 - 2956		
bis(2-chloroisopropyl)ether	NR	<1500						
Bis(2-ethylhexyl)phthalate	<330	<1500	A					
Butylbenzylphthalate	3210	3537	A		-0.38	981 - 6094		
Chrysene	<330	<1000	A					
Di-n-butylphthalate	2290	2092	A		0.35	394 - 3790		
Di-n-octylphthalate	<330	<1500	A					
Dibenzo(a,h)anthracene	<330	<1000	A					
Dibenzofuran	<330	<1500	A					
Diethylphthalate	2390	2159	A		0.41	467 - 3852		
Dimethylphthalate	4590	4221	A		0.40	1476 - 6967		
Fluoranthene	2970	2521	A		0.88	995 - 4048		
Fluorene	<330	<1000	A					
Hexachlorobenzene	1420	1333	A		0.31	481 - 2184		
Hexachlorobutadiene	1820	1626	A		0.43	255 - 2996		
Hexachloroethane	2940	2691	A		0.27	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<330	<1000	A					
Isophorone	3160	3054	A		0.15	967 - 5141		
Naphthalene	4190	3932	A		0.28	1148 - 6716		
Nitrobenzene	4460	4287	A		0.16	1006 - 7568		
Pentachlorophenol	1650	2011	A		-0.44	201 - 4497		
Phenanthrene	<330	<1000	A					
Phenol	<330	<1000	A					
Pyrene	1140	1067	A		0.32	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(DAFI01) Davis & Floyd, Inc.
PO Drawer 428
Greenwood, SC 29648

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	191	197	A		-0.15	72 - 322		
4,4'-DDE	167	184	A		-0.44	70 - 297		
4,4'-DDT	<1.67	<50	A					
Aldrin	<1.67	<50	A					
alpha Chlordane	<1.67	<50	A					
alpha-BHC	326	313	A		0.19	115 - 511		
beta-BHC	370	315	A		0.70	80 - 550		
delta-BHC	<1.67	<50	A					
Dieldrin	<1.67	<50	A					
Endosulfan I	156	163	A		-0.21	59 - 268		
Endosulfan II	172	171	A		0.04	57 - 284		
Endosulfan sulfate	639	502	A		1.13	139 - 865		
Endrin	<1.67	<50	A					
Endrin Aldehyde	156	175	A		-0.37	23 - 326		
Endrin Ketone	<1.67	<50	A					
gamma Chlordane	<1.67	<50	A					
gamma-BHC (Lindane)	<1.67	<50	A					
Heptachlor	299	262	A		0.67	95 - 428		
Heptachlor epoxide	<1.67	<50	A					
Methoxychlor	<16.7	<50	A					
1,2,4-Trichlorobenzene	1530	1779	A		-0.52	351 - 3208		
1,2-Dichlorobenzene	<319	<1500	A					
1,3-Dichlorobenzene	1350	1806	A		-0.69	181 - 3799		
1,4-Dichlorobenzene	1020	1339	A		-0.69	134 - 2728		
2,4,5-Trichlorophenol	1840	1892	A		-0.10	347 - 3437		
2,4,6-Trichlorophenol	2120	1994	A		0.23	321 - 3668		
2,4-Dichlorophenol	3450	3952	A		-0.49	902 - 7003		
2,4-Dinitrophenol	<799	<600	A					
2,4-Dinitrotoluene	2860	3083	A		-0.27	574 - 5592		
2,6-Dinitrotoluene	4300	4861	A		-0.58	1936 - 7787		
2-Chloronaphthalene	<319	<1000	A					
2-Chlorophenol	2540	2962	A		-0.54	596 - 5329		
2-Methylnaphthalene	<319	<1000	A					
2-Methylphenol	681	747	A		-0.20	75 - 1744		
2-Nitrophenol	<319	<1000	A					
4-Bromophenyl-phenylether	3760	4274	A		-0.59	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	1720	1881	A		-0.31	321 - 3440		
4-Chlorophenyl-phenylether	4580	5002	A		-0.39	1770 - 8234		
4-Methylphenol	<319	<1000	A					
4-Nitrophenol	<799	<1000	A					
Acenaphthene	<319	<1000	A					
Acenaphthylene	<319	<1000	A					
Anthracene	1860	2099	A		-0.48	602 - 3596		
Benzo(a)anthracene	1040	1161	A		-0.47	379 - 1943		
Benzo(a)pyrene	<319	<1000	A					
Benzo(b)fluoranthene	<319	<1000	A					
Benzo(g,h,i)perylene	<319	<1000	A					
Benzo(k)fluoranthene	<319	<1000	A					
bis(2-chloroethoxy)methane	1860	2149	A		-0.52	493 - 3806		
bis(2-chloroethyl)ether	1300	1478	A		-0.36	148 - 2956		
bis(2-chloroisopropyl)ether	<319	<1500	A					
Bis(2-ethylhexyl)phthalate	1130	<1500	A					
Butylbenzylphthalate	3030	3537	A		-0.60	981 - 6094		
Chrysene	<319	<1000	A					
Di-n-butylphthalate	1820	2092	A		-0.48	394 - 3790		
Di-n-octylphthalate	<319	<1500	A					
Dibenzo(a,h)anthracene	<319	<1000	A					
Dibenzofuran	<319	<1500	A					
Diethylphthalate	1830	2159	A		-0.58	467 - 3852		
Dimethylphthalate	3970	4221	A		-0.27	1476 - 6967		
Fluoranthene	2050	2521	A		-0.93	995 - 4048		
Fluorene	<319	<1000	A					
Hexachlorobenzene	1220	1333	A		-0.40	481 - 2184		
Hexachlorobutadiene	1400	1626	A		-0.49	255 - 2996		
Hexachloroethane	1990	2691	A		-0.77	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<319	<1000	A					
Isophorone	2400	3054	A		-0.94	967 - 5141		
Naphthalene	3120	3932	A		-0.88	1148 - 6716		
Nitrobenzene	3400	4287	A		-0.81	1006 - 7568		
Pentachlorophenol	1310	2011	A		-0.85	201 - 4497		
Phenanthrene	<319	<1000	A					
Phenol	<319	<1000	A					
Pyrene	925	1067	A		-0.61	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

MAPEP Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(DPAL01) S&S Onsite Analytical, Ltd.
7277 Twp. Rd. 95
Findlay, OH 45840

Organic — Units: (ug/kg)

Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	NR	197				72 - 322		
4,4'-DDE	NR	184				70 - 297		
4,4'-DDT	NR	<50						
Aldrin	NR	<50						
alpha Chlordane	NR	<50						
alpha-BHC	NR	313				115 - 511		
beta-BHC	NR	315				80 - 550		
delta-BHC	NR	<50						
Dieldrin	NR	<50						
Endosulfan I	NR	163				59 - 268		
Endosulfan II	NR	171				57 - 284		
Endosulfan sulfate	NR	502				139 - 865		
Endrin	NR	<50						
Endrin Aldehyde	NR	175				23 - 326		
Endrin Ketone	NR	<50						
gamma Chlordane	NR	<50						
gamma-BHC (Lindane)	NR	<50						
Heptachlor	NR	262				95 - 428		
Heptachlor epoxide	NR	<50						
Methoxychlor	NR	<50						
1,2,4-Trichlorobenzene	1640	1779	A		-0.29	351 - 3208		
1,2-Dichlorobenzene	NR	<1500						
1,3-Dichlorobenzene	2010	1806	A		0.31	181 - 3799		
1,4-Dichlorobenzene	1480	1339	A		0.31	134 - 2728		
2,4,5-Trichlorophenol	1700	1892	A		-0.37	347 - 3437		
2,4,6-Trichlorophenol	1760	1994	A		-0.42	321 - 3668		
2,4-Dichlorophenol	3470	3952	A		-0.48	902 - 7003		
2,4-Dinitrophenol	NR	<600						
2,4-Dinitrotoluene	3010	3083	A		-0.09	574 - 5592		
2,6-Dinitrotoluene	4170	4861	A		-0.71	1936 - 7787		
2-Chloronaphthalene	NR	<1000						
2-Chlorophenol	3010	2962	A		0.06	596 - 5329		
2-Methylnaphthalene	NR	<1000						
2-Methylphenol	NR	747				75 - 1744		
2-Nitrophenol	NR	<1000						
4-Bromophenyl-phenylether	3820	4274	A		-0.52	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	1320	1881	A		-1.08	321 - 3440		
4-Chlorophenyl-phenylether	4830	5002	A		-0.16	1770 - 8234		
4-Methylphenol	NR	<1000						
4-Nitrophenol	NR	<1000						
Acenaphthene	NR	<1000						
Acenaphthylene	NR	<1000						
Anthracene	1760	2099	A		-0.68	602 - 3596		
Benzo(a)anthracene	1160	1161	A		0.00	379 - 1943		
Benzo(a)pyrene	NR	<1000						
Benzo(b)fluoranthene	NR	<1000						
Benzo(g,h,i)perylene	NR	<1000						
Benzo(k)fluoranthene	NR	<1000						
bis(2-chloroethoxy)methane	2140	2149	A		-0.02	493 - 3806		
bis(2-chloroethyl)ether	1370	1478	A		-0.22	148 - 2956		
bis(2-chloroisopropyl)ether	NR	<1500						
Bis(2-ethylhexyl)phthalate	NR	<1500						
Butylbenzylphthalate	3240	3537	A		-0.35	981 - 6094		
Chrysene	1080	<1000	N					
Di-n-butylphthalate	1840	2092	A		-0.45	394 - 3790		
Di-n-octylphthalate	NR	<1500						
Dibenzo(a,h)anthracene	NR	<1000						
Dibenzofuran	NR	<1500						
Diethylphthalate	1910	2159	A		-0.44	467 - 3852		
Dimethylphthalate	3720	4221	A		-0.55	1476 - 6967		
Fluoranthene	2110	2521	A		-0.81	995 - 4048		
Fluorene	NR	<1000						
Hexachlorobenzene	1010	1333	A		-1.14	481 - 2184		
Hexachlorobutadiene	1610	1626	A		-0.03	255 - 2996		
Hexachloroethane	3030	2691	A		0.37	269 - 5410		
Indeno(1,2,3-c,d)pyrene	NR	<1000						
Isophorone	3020	3054	A		-0.05	967 - 5141		
Naphthalene	3960	3932	A		0.03	1148 - 6716		
Nitrobenzene	3160	4287	A		-1.03	1006 - 7568		
Pentachlorophenol	2500	2011	A		0.59	201 - 4497		
Phenanthrene	NR	<1000						
Phenol	NR	<1000						
Pyrene	910	1067	A		-0.68	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

MAPEP Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(EMAX01) EMAX Laboratories, Inc
1835 W. 205th St.
Torrance, CA 90501

Organic — Units: (ug/kg)

Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	228	197	A		0.74	72 - 322		
4,4'-DDE	189	184	A		0.14	70 - 297		
4,4'-DDT	< 2.0	<50	A					
Aldrin	< 2.0	<50	A					
alpha Chlordane	< 2.0	<50	A					
alpha-BHC	281	313	A		-0.49	115 - 511		
beta-BHC	319	315	A		0.05	80 - 550		
delta-BHC	< 2.0	<50	A					
Dieldrin	< 2.0	<50	A					
Endosulfan I	169	163	A		0.17	59 - 268		
Endosulfan II	183	171	A		0.33	57 - 284		
Endosulfan sulfate	501	502	A		-0.01	139 - 865		
Endrin	< 2.0	<50	A					
Endrin Aldehyde	184	175	A		0.18	23 - 326		
Endrin Ketone	< 2.0	<50	A					
gamma Chlordane	< 2.0	<50	A					
gamma-BHC (Lindane)	< 2.0	<50	A					
Heptachlor	249	262	A		-0.23	95 - 428		
Heptachlor epoxide	< 2.0	<50	A					
Methoxychlor	< 10	<50	A					
1,2,4-Trichlorobenzene	1610	1779	A		-0.36	351 - 3208		
1,2-Dichlorobenzene	<333	<1500	A					
1,3-Dichlorobenzene	1120	1806	A		-1.03	181 - 3799		
1,4-Dichlorobenzene	859	1339	A		-1.04	134 - 2728		
2,4,5-Trichlorophenol	1770	1892	A		-0.24	347 - 3437		
2,4,6-Trichlorophenol	2100	1994	A		0.19	321 - 3668		
2,4-Dichlorophenol	4210	3952	A		0.25	902 - 7003		
2,4-Dinitrophenol	<667	<600	A					
2,4-Dinitrotoluene	2580	3083	A		-0.60	574 - 5592		
2,6-Dinitrotoluene	5500	4861	A		0.66	1936 - 7787		
2-Chloronaphthalene	<333	<1000	A					
2-Chlorophenol	2700	2962	A		-0.33	596 - 5329		
2-Methylnaphthalene	<333	<1000	A					
2-Methylphenol	621	747	A		-0.38	75 - 1744		
2-Nitrophenol	<333	<1000	A					
4-Bromophenyl-phenylether	4940	4274	A		0.76	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2100	1881	A		0.42	321 - 3440		
4-Chlorophenyl-phenylether	5720	5002	A		0.67	1770 - 8234		
4-Methylphenol	<333	<1000	A					
4-Nitrophenol	<667	<1000	A					
Acenaphthene	<333	<1000	A					
Acenaphthylene	<333	<1000	A					
Anthracene	2040	2099	A		-0.12	602 - 3596		
Benzo(a)anthracene	1180	1161	A		0.07	379 - 1943		
Benzo(a)pyrene	<333	<1000	A					
Benzo(b)fluoranthene	<333	<1000	A					
Benzo(g,h,i)perylene	<333	<1000	A					
Benzo(k)fluoranthene	<333	<1000	A					
bis(2-chloroethoxy)methane	2460	2149	A		0.56	493 - 3806		
bis(2-chloroethyl)ether	1420	1478	A		-0.12	148 - 2956		
bis(2-chloroisopropyl)ether	<333	<1500	A					
Bis(2-ethylhexyl)phthalate	1940	<1500	N					
Butylbenzylphthalate	4100	3537	A		0.66	981 - 6094		
Chrysene	<333	<1000	A					
Di-n-butylphthalate	2170	2092	A		0.14	394 - 3790		
Di-n-octylphthalate	<333	<1500	A					
Dibenzo(a,h)anthracene	<333	<1000	A					
Dibenzofuran	<333	<1500	A					
Diethylphthalate	2240	2159	A		0.14	467 - 3852		
Dimethylphthalate	4520	4221	A		0.33	1476 - 6967		
Fluoranthene	2590	2521	A		0.14	995 - 4048		
Fluorene	<333	<1000	A					
Hexachlorobenzene	1450	1333	A		0.41	481 - 2184		
Hexachlorobutadiene	1520	1626	A		-0.23	255 - 2996		
Hexachloroethane	1780	2691	A		-1.01	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<333	<1000	A					
Isophorone	3130	3054	A		0.11	967 - 5141		
Naphthalene	4010	3932	A		0.08	1148 - 6716		
Nitrobenzene	4680	4287	A		0.36	1006 - 7568		
Pentachlorophenol	2140	2011	A		0.16	201 - 4497		
Phenanthrene	<333	<1000	A					
Phenol	<333	<1000	A					
Pyrene	1210	1067	A		0.62	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(GENE01) GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

Organic — Units: (ug/kg)

Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	197	197	A		-0.01	72 - 322		
4,4'-DDE	190	184	A		0.17	70 - 297		
4,4'-DDT	<6.44	<50	A					
Aldrin	<0.644	<50	A					
alpha Chlordane	<0.644	<50	A					
alpha-BHC	337	313	A		0.36	115 - 511		
beta-BHC	498	315	A		2.33	80 - 550		
delta-BHC	<0.644	<50	A					
Dieldrin	<6.44	<50	A					
Endosulfan I	172	163	A		0.25	59 - 268		
Endosulfan II	164	171	A		-0.17	57 - 284		
Endosulfan sulfate	529	502	A		0.22	139 - 865		
Endrin	<1.29	<50	A					
Endrin Aldehyde	206	175	A		0.62	23 - 326		
Endrin Ketone	<1.29	<50	A					
gamma Chlordane	<0.644	<50	A					
gamma-BHC (Lindane)	<0.644	<50	A					
Heptachlor	316	262	A		0.98	95 - 428		
Heptachlor epoxide	<0.644	<50	A					
Methoxychlor	<6.44	<50	A					
1,2,4-Trichlorobenzene	1050	1779	A		-1.53	351 - 3208		
1,2-Dichlorobenzene	<321	<1500	A					
1,3-Dichlorobenzene	459	1806	A		-2.03	181 - 3799		
1,4-Dichlorobenzene	350	1339	A		-2.14	134 - 2728		
2,4,5-Trichlorophenol	1420	1892	A		-0.92	347 - 3437		
2,4,6-Trichlorophenol	1400	1994	A		-1.07	321 - 3668		
2,4-Dichlorophenol	2850	3952	A		-1.08	902 - 7003		
2,4-Dinitrophenol	<642	<600	A					
2,4-Dinitrotoluene	2610	3083	A		-0.57	574 - 5592		
2,6-Dinitrotoluene	3800	4861	A		-1.09	1936 - 7787		
2-Chloronaphthalene	<32.1	<1000	A					
2-Chlorophenol	1980	2962	A		-1.25	596 - 5329		
2-Methylnaphthalene	<32.1	<1000	A					
2-Methylphenol	<321	747	A			75 - 1744		
2-Nitrophenol	<321	<1000	A					
4-Bromophenyl-phenylether	3270	4274	A		-1.15	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	1390	1881	A		-0.94	321 - 3440		
4-Chlorophenyl-phenylether	3800	5002	A		-1.12	1770 - 8234		
4-Methylphenol	<321	<1000	A					
4-Nitrophenol	<321	<1000	A					
Acenaphthene	<32.1	<1000	A					
Acenaphthylene	<32.1	<1000	A					
Anthracene	1300	2099	A		-1.60	602 - 3596		
Benzo(a)anthracene	899	1161	A		-1.01	379 - 1943		
Benzo(a)pyrene	<32.1	<1000	A					
Benzo(b)fluoranthene	<32.1	<1000	A					
Benzo(g,h,i)perylene	<32.1	<1000	A					
Benzo(k)fluoranthene	<32.1	<1000	A					
bis(2-chloroethoxy)methane	1570	2149	A		-1.05	493 - 3806		
bis(2-chloroethyl)ether	984	1478	A		-1.00	148 - 2956		
bis(2-chloroisopropyl)ether	<321	<1500	A					
Bis(2-ethylhexyl)phthalate	<321	<1500	A					
Butylbenzylphthalate	2910	3537	A		-0.74	981 - 6094		
Chrysene	<32.1	<1000	A					
Di-n-butylphthalate	1730	2092	A		-0.64	394 - 3790		
Di-n-octylphthalate	<321	<1500	A					
Dibenzo(a,h)anthracene	<32.1	<1000	A					
Dibenzofuran	<321	<1500	A					
Diethylphthalate	1740	2159	A		-0.74	467 - 3852		
Dimethylphthalate	3300	4221	A		-1.01	1476 - 6967		
Fluoranthene	2120	2521	A		-0.79	995 - 4048		
Fluorene	<32.1	<1000	A					
Hexachlorobenzene	953	1333	A		-1.34	481 - 2184		
Hexachlorobutadiene	850	1626	A		-1.70	255 - 2996		
Hexachloroethane	807	2691	A		-2.08	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<32.1	<1000	A					
Isophorone	2490	3054	A		-0.81	967 - 5141		
Naphthalene	2430	3932	A		-1.62	1148 - 6716		
Nitrobenzene	3030	4287	A		-1.15	1006 - 7568		
Pentachlorophenol	1570	2011	A		-0.53	201 - 4497		
Phenanthrene	<32.1	<1000	A					
Phenol	<321	<1000	A					
Pyrene	797	1067	A		-1.17	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(MART02) United States Enrichment Corporation
PO Box 1410
Paducah, KY 42002

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	NR	197				72 - 322		
4,4'-DDE	NR	184				70 - 297		
4,4'-DDT	NR	<50						
Aldrin	NR	<50						
alpha Chlordane	NR	<50						
alpha-BHC	NR	313				115 - 511		
beta-BHC	NR	315				80 - 550		
delta-BHC	NR	<50						
Dieldrin	NR	<50						
Endosulfan I	NR	163				59 - 268		
Endosulfan II	NR	171				57 - 284		
Endosulfan sulfate	NR	502				139 - 865		
Endrin	NR	<50						
Endrin Aldehyde	NR	175				23 - 326		
Endrin Ketone	NR	<50						
gamma Chlordane	NR	<50						
gamma-BHC (Lindane)	NR	<50						
Heptachlor	NR	262				95 - 428		
Heptachlor epoxide	NR	<50						
Methoxychlor	NR	<50						
1,2,4-Trichlorobenzene	1900	1779	A		0.25	351 - 3208		
1,2-Dichlorobenzene	<170	<1500	A					
1,3-Dichlorobenzene	2000	1806	A		0.29	181 - 3799		
1,4-Dichlorobenzene	1500	1339	A		0.35	134 - 2728		
2,4,5-Trichlorophenol	2100	1892	A		0.40	347 - 3437		
2,4,6-Trichlorophenol	2200	1994	A		0.37	321 - 3668		
2,4-Dichlorophenol	4200	3952	A		0.24	902 - 7003		
2,4-Dinitrophenol	<170	<600	A					
2,4-Dinitrotoluene	3300	3083	A		0.26	574 - 5592		
2,6-Dinitrotoluene	5200	4861	A		0.35	1936 - 7787		
2-Chloronaphthalene	<170	<1000	A					
2-Chlorophenol	3200	2962	A		0.30	596 - 5329		
2-Methylnaphthalene	<170	<1000	A					
2-Methylphenol	910	747	A		0.49	75 - 1744		
2-Nitrophenol	<170	<1000	A					
4-Bromophenyl-phenylether	4300	4274	A		0.03	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2000	1881	A		0.23	321 - 3440		
4-Chlorophenyl-phenylether	5000	5002	A		0.00	1770 - 8234		
4-Methylphenol	<170	<1000	A					
4-Nitrophenol	<170	<1000	A					
Acenaphthene	<170	<1000	A					
Acenaphthylene	<170	<1000	A					
Anthracene	2200	2099	A		0.20	602 - 3596		
Benzo(a)anthracene	1300	1161	A		0.53	379 - 1943		
Benzo(a)pyrene	<170	<1000	A					
Benzo(b)fluoranthene	<170	<1000	A					
Benzo(g,h,i)perylene	<170	<1000	A					
Benzo(k)fluoranthene	<170	<1000	A					
bis(2-chloroethoxy)methane	2200	2149	A		0.09	493 - 3806		
bis(2-chloroethyl)ether	1600	1478	A		0.25	148 - 2956		
bis(2-chloroisopropyl)ether	<170	<1500	A					
Bis(2-ethylhexyl)phthalate	1600	<1500	N					
Butylbenzylphthalate	4100	3537	A		0.66	981 - 6094		
Chrysene	<170	<1000	A					
Di-n-butylphthalate	2200	2092	A		0.19	394 - 3790		
Di-n-octylphthalate	<170	<1500	A					
Dibenzo(a,h)anthracene	<170	<1000	A					
Dibenzofuran	<170	<1500	A					
Diethylphthalate	2200	2159	A		0.07	467 - 3852		
Dimethylphthalate	4400	4221	A		0.20	1476 - 6967		
Fluoranthene	2500	2521	A		-0.04	995 - 4048		
Fluorene	<170	<1000	A					
Hexachlorobenzene	1400	1333	A		0.24	481 - 2184		
Hexachlorobutadiene	1700	1626	A		0.16	255 - 2996		
Hexachloroethane	3000	2691	A		0.34	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<170	<1000	A					
Isophorone	3000	3054	A		-0.08	967 - 5141		
Naphthalene	4200	3932	A		0.29	1148 - 6716		
Nitrobenzene	4500	4287	A		0.20	1006 - 7568		
Pentachlorophenol	3100	2011	A		1.31	201 - 4497		
Phenanthrene	<170	<1000	A					
Phenol	<170	<1000	A					
Pyrene	1200	1067	A		0.58	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(MLIL01) Microbac Laboratories, Inc
158 Starlite Drive
Marietta, OH 45750

Organic — Units: (ug/kg)

Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	170	197	A		-0.66	72 - 322		
4,4'-DDE	120	184	A		-1.68	70 - 297		
4,4'-DDT	<1.65	<50	A					
Aldrin	<1.65	<50	A					
alpha Chlordane	<1.65	<50	A					
alpha-BHC	267	313	A		-0.70	115 - 511		
beta-BHC	255	315	A		-0.77	80 - 550		
delta-BHC	<1.65	<50	A					
Dieldrin	<1.65	<50	A					
Endosulfan I	152	163	A		-0.32	59 - 268		
Endosulfan II	132	171	A		-1.02	57 - 284		
Endosulfan sulfate	326	502	A		-1.45	139 - 865		
Endrin	<1.65	<50	A					
Endrin Aldehyde	134	175	A		-0.81	23 - 326		
Endrin Ketone	<1.65	<50	A					
gamma Chlordane	<1.65	<50	A					
gamma-BHC (Lindane)	<1.65	<50	A					
Heptachlor	213	262	A		-0.88	95 - 428		
Heptachlor epoxide	<1.65	<50	A					
Methoxychlor	<1.65	<50	A					
1,2,4-Trichlorobenzene	1490	1779	A		-0.61	351 - 3208		
1,2-Dichlorobenzene	<110	<1500	A					
1,3-Dichlorobenzene	1520	1806	A		-0.43	181 - 3799		
1,4-Dichlorobenzene	1130	1339	A		-0.45	134 - 2728		
2,4,5-Trichlorophenol	2000	1892	A		0.21	347 - 3437		
2,4,6-Trichlorophenol	2160	1994	A		0.30	321 - 3668		
2,4-Dichlorophenol	3970	3952	A		0.02	902 - 7003		
2,4-Dinitrophenol	<550	<600	A					
2,4-Dinitrotoluene	3000	3083	A		-0.10	574 - 5592		
2,6-Dinitrotoluene	4430	4861	A		-0.44	1936 - 7787		
2-Chloronaphthalene	<110	<1000	A					
2-Chlorophenol	2920	2962	A		-0.05	596 - 5329		
2-Methylnaphthalene	<110	<1000	A					
2-Methylphenol	762	747	A		0.05	75 - 1744		
2-Nitrophenol	<110	<1000	A					
4-Bromophenyl-phenylether	3600	4274	A		-0.77	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	1720	1881	A		-0.31	321 - 3440		
4-Chlorophenyl-phenylether	4070	5002	A		-0.87	1770 - 8234		
4-Methylphenol	<110	<1000	A					
4-Nitrophenol	<550	<1000	A					
Acenaphthene	<110	<1000	A					
Acenaphthylene	<110	<1000	A					
Anthracene	1860	2099	A		-0.48	602 - 3596		
Benzo(a)anthracene	920	1161	A		-0.93	379 - 1943		
Benzo(a)pyrene	<110	<1000	A					
Benzo(b)fluoranthene	<110	<1000	A					
Benzo(g,h,i)perylene	<110	<1000	A					
Benzo(k)fluoranthene	<110	<1000	A					
bis(2-chloroethoxy)methane	1500	2149	A		-1.18	493 - 3806		
bis(2-chloroethyl)ether	1190	1478	A		-0.58	148 - 2956		
bis(2-chloroisopropyl)ether	<110	<1500	A					
Bis(2-ethylhexyl)phthalate	727	<1500	A					
Butylbenzylphthalate	2940	3537	A		-0.70	981 - 6094		
Chrysene	<110	<1000	A					
Di-n-butylphthalate	1670	2092	A		-0.75	394 - 3790		
Di-n-octylphthalate	<110	<1500	A					
Dibenzo(a,h)anthracene	<110	<1000	A					
Dibenzofuran	<110	<1500	A					
Diethylphthalate	2010	2159	A		-0.27	467 - 3852		
Dimethylphthalate	4040	4221	A		-0.20	1476 - 6967		
Fluoranthene	2090	2521	A		-0.85	995 - 4048		
Fluorene	<110	<1000	A					
Hexachlorobenzene	1130	1333	A		-0.72	481 - 2184		
Hexachlorobutadiene	1370	1626	A		-0.56	255 - 2996		
Hexachloroethane	2190	2691	A		-0.55	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<110	<1000	A					
Isophorone	2770	3054	A		-0.41	967 - 5141		
Naphthalene	3360	3932	A		-0.62	1148 - 6716		
Nitrobenzene	4190	4287	A		-0.09	1006 - 7568		
Pentachlorophenol	2720	2011	A		0.86	201 - 4497		
Phenanthrene	<110	<1000	A					
Phenol	<110	<1000	A					
Pyrene	911	1067	A		-0.67	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(QUAN01) TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045-

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	207	197	A		0.23	72 - 322		
4,4'-DDE	196	184	A		0.33	70 - 297		
4,4'-DDT	< 1.70	<50	A					
Aldrin	< 1.70	<50	A					
alpha Chlordane	< 1.70	<50	A					
alpha-BHC	294	313	A		-0.29	115 - 511		
beta-BHC	257	315	A		-0.74	80 - 550		
delta-BHC	< 1.70	<50	A					
Dieldrin	< 1.70	<50	A					
Endosulfan I	164	163	A		0.02	59 - 268		
Endosulfan II	165	171	A		-0.15	57 - 284		
Endosulfan sulfate	514	502	A		0.10	139 - 865		
Endrin	< 1.70	<50	A					
Endrin Aldehyde	189	175	A		0.28	23 - 326		
Endrin Ketone	< 1.70	<50	A					
gamma Chlordane	< 1.70	<50	A					
gamma-BHC (Lindane)	< 1.70	<50	A					
Heptachlor	261	262	A		-0.01	95 - 428		
Heptachlor epoxide	< 1.70	<50	A					
Methoxychlor	< 3.30	<50	A					
1,2,4-Trichlorobenzene	1440	1779	A		-0.71	351 - 3208		
1,2-Dichlorobenzene	< 330	<1500	A					
1,3-Dichlorobenzene	1250	1806	A		-0.84	181 - 3799		
1,4-Dichlorobenzene	910	1339	A		-0.93	134 - 2728		
2,4,5-Trichlorophenol	1210	1892	A		-1.33	347 - 3437		
2,4,6-Trichlorophenol	1390	1994	A		-1.08	321 - 3668		
2,4-Dichlorophenol	2870	3952	A		-1.07	902 - 7003		
2,4-Dinitrophenol	< 1600	<600	A	(19)				
2,4-Dinitrotoluene	2330	3083	A		-0.90	574 - 5592		
2,6-Dinitrotoluene	3690	4861	A		-1.20	1936 - 7787		
2-Chloronaphthalene	< 330	<1000	A					
2-Chlorophenol	2280	2962	A		-0.87	596 - 5329		
2-Methylnaphthalene	< 330	<1000	A					
2-Methylphenol	485	747	A		-0.79	75 - 1744		
2-Nitrophenol	< 330	<1000	A					
4-Bromophenyl-phenylether	4010	4274	A		-0.30	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	1320	1881	A		-1.08	321 - 3440		
4-Chlorophenyl-phenylether	4340	5002	A		-0.62	1770 - 8234		
4-Methylphenol	< 660	<1000	A					
4-Nitrophenol	< 1600	<1000	A	(19)				
Acenaphthene	< 330	<1000	A					
Acenaphthylene	< 330	<1000	A					
Anthracene	1890	2099	A		-0.42	602 - 3596		
Benzo(a)anthracene	1120	1161	A		-0.16	379 - 1943		
Benzo(a)pyrene	< 330	<1000	A					
Benzo(b)fluoranthene	< 330	<1000	A					
Benzo(g,h,i)perylene	< 330	<1000	A					
Benzo(k)fluoranthene	< 330	<1000	A					
bis(2-chloroethoxy)methane	1760	2149	A		-0.71	493 - 3806		
bis(2-chloroethyl)ether	1230	1478	A		-0.50	148 - 2956		
bis(2-chloroisopropyl)ether	< 330	<1500	A					
Bis(2-ethylhexyl)phthalate	< 330	<1500	A					
Butylbenzylphthalate	3240	3537	A		-0.35	981 - 6094		
Chrysene	< 330	<1000	A					
Di-n-butylphthalate	1720	2092	A		-0.66	394 - 3790		
Di-n-octylphthalate	< 330	<1500	A					
Dibenzo(a,h)anthracene	< 330	<1000	A					
Dibenzofuran	< 330	<1500	A					
Diethylphthalate	1790	2159	A		-0.66	467 - 3852		
Dimethylphthalate	3550	4221	A		-0.73	1476 - 6967		
Fluoranthene	2200	2521	A		-0.63	995 - 4048		
Fluorene	< 330	<1000	A					
Hexachlorobenzene	1150	1333	A		-0.64	481 - 2184		
Hexachlorobutadiene	1390	1626	A		-0.52	255 - 2996		
Hexachloroethane	1960	2691	A		-0.81	269 - 5410		
Indeno(1,2,3-c,d)pyrene	< 330	<1000	A					
Isophorone	2600	3054	A		-0.65	967 - 5141		
Naphthalene	3400	3932	A		-0.57	1148 - 6716		
Nitrobenzene	3520	4287	A		-0.70	1006 - 7568		
Pentachlorophenol	958	2011	A		-1.27	201 - 4497		
Phenanthrene	< 330	<1000	A					
Phenol	< 330	<1000	A					
Pyrene	959	1067	A		-0.47	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(QUAN02) TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	NR	197				72 - 322		
4,4'-DDE	NR	184				70 - 297		
4,4'-DDT	NR	<50						
Aldrin	NR	<50						
alpha Chlordane	NR	<50						
alpha-BHC	NR	313				115 - 511		
beta-BHC	NR	315				80 - 550		
delta-BHC	NR	<50						
Dieldrin	NR	<50						
Endosulfan I	NR	163				59 - 268		
Endosulfan II	NR	171				57 - 284		
Endosulfan sulfate	NR	502				139 - 865		
Endrin	NR	<50						
Endrin Aldehyde	NR	175				23 - 326		
Endrin Ketone	NR	<50						
gamma Chlordane	NR	<50						
gamma-BHC (Lindane)	NR	<50						
Heptachlor	NR	262				95 - 428		
Heptachlor epoxide	NR	<50						
Methoxychlor	NR	<50						
1,2,4-Trichlorobenzene	1580	1779	A		-0.42	351 - 3208		
1,2-Dichlorobenzene	<330	<1500	A					
1,3-Dichlorobenzene	1600	1806	A		-0.31	181 - 3799		
1,4-Dichlorobenzene	1210	1339	A		-0.28	134 - 2728		
2,4,5-Trichlorophenol	1770	1892	A		-0.24	347 - 3437		
2,4,6-Trichlorophenol	1850	1994	A		-0.26	321 - 3668		
2,4-Dichlorophenol	3490	3952	A		-0.46	902 - 7003		
2,4-Dinitrophenol	<1600	<600	A	(19)				
2,4-Dinitrotoluene	3090	3083	A		0.01	574 - 5592		
2,6-Dinitrotoluene	4410	4861	A		-0.46	1936 - 7787		
2-Chloronaphthalene	<330	<1000	A					
2-Chlorophenol	2760	2962	A		-0.26	596 - 5329		
2-Methylnaphthalene	<330	<1000	A					
2-Methylphenol	787	747	A		0.12	75 - 1744		
2-Nitrophenol	<330	<1000	A					
4-Bromophenyl-phenylether	3910	4274	A		-0.42	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	1850	1881	A		-0.06	321 - 3440		
4-Chlorophenyl-phenylether	4480	5002	A		-0.49	1770 - 8234		
4-Methylphenol	<330	<1000	A					
4-Nitrophenol	<1600	<1000	A	(19)				
Acenaphthene	<330	<1000	A					
Acenaphthylene	<330	<1000	A					
Anthracene	2010	2099	A		-0.18	602 - 3596		
Benzo(a)anthracene	1140	1161	A		-0.08	379 - 1943		
Benzo(a)pyrene	<330	<1000	A					
Benzo(b)fluoranthene	<330	<1000	A					
Benzo(g,h,i)perylene	<330	<1000	A					
Benzo(k)fluoranthene	<330	<1000	A					
bis(2-chloroethoxy)methane	1920	2149	A		-0.42	493 - 3806		
bis(2-chloroethyl)ether	1440	1478	A		-0.08	148 - 2956		
bis(2-chloroisopropyl)ether	<330	<1500	A					
Bis(2-ethylhexyl)phthalate	1070	<1500	A					
Butylbenzylphthalate	3840	3537	A		0.36	981 - 6094		
Chrysene	<330	<1000	A					
Di-n-butylphthalate	2100	2092	A		0.01	394 - 3790		
Di-n-octylphthalate	<330	<1500	A					
Dibenzo(a,h)anthracene	<330	<1000	A					
Dibenzofuran	<330	<1500	A					
Diethylphthalate	2130	2159	A		-0.05	467 - 3852		
Dimethylphthalate	4100	4221	A		-0.13	1476 - 6967		
Fluoranthene	2370	2521	A		-0.30	995 - 4048		
Fluorene	<330	<1000	A					
Hexachlorobenzene	1240	1333	A		-0.33	481 - 2184		
Hexachlorobutadiene	1350	1626	A		-0.60	255 - 2996		
Hexachloroethane	2520	2691	A		-0.19	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<330	<1000	A					
Isophorone	2800	3054	A		-0.37	967 - 5141		
Naphthalene	3040	3932	A		-0.96	1148 - 6716		
Nitrobenzene	3950	4287	A		-0.31	1006 - 7568		
Pentachlorophenol	1430	2011	A		-0.70	201 - 4497		
Phenanthrene	<330	<1000	A					
Phenol	<330	<1000	A					
Pyrene	1130	1067	A		0.28	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(SOUT01) Southwest Research Institute
6220 Culebra Rd.
San Antonio, TX 78228-0510

Organic — Units: (ug/kg)

Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	214	197	A		0.40	72 - 322		
4,4'-DDE	138	184	A		-1.21	70 - 297		
4,4'-DDT	<1.66	<50	A					
Aldrin	<0.830	<50	A					
alpha Chlordane	<0.830	<50	A					
alpha-BHC	319	313	A		0.09	115 - 511		
beta-BHC	244	315	A		-0.91	80 - 550		
delta-BHC	<0.830	<50	A					
Dieldrin	<1.66	<50	A					
Endosulfan I	169	163	A		0.17	59 - 268		
Endosulfan II	170	171	A		-0.01	57 - 284		
Endosulfan sulfate	449	502	A		-0.44	139 - 865		
Endrin	<1.66	<50	A					
Endrin Aldehyde	162	175	A		-0.25	23 - 326		
Endrin Ketone	<1.66	<50	A					
gamma Chlordane	<0.830	<50	A					
gamma-BHC (Lindane)	<0.830	<50	A					
Heptachlor	258	262	A		-0.07	95 - 428		
Heptachlor epoxide	<0.830	<50	A					
Methoxychlor	<8.30	<50	A					
1,2,4-Trichlorobenzene	2200	1779	A		0.88	351 - 3208		
1,2-Dichlorobenzene	<160	<1500	A					
1,3-Dichlorobenzene	2100	1806	A		0.44	181 - 3799		
1,4-Dichlorobenzene	1600	1339	A		0.56	134 - 2728		
2,4,5-Trichlorophenol	2400	1892	A		0.99	347 - 3437		
2,4,6-Trichlorophenol	2600	1994	A		1.09	321 - 3668		
2,4-Dichlorophenol	5500	3952	A		1.52	902 - 7003		
2,4-Dinitrophenol	<160	<600	A					
2,4-Dinitrotoluene	3700	3083	A		0.74	574 - 5592		
2,6-Dinitrotoluene	5700	4861	A		0.86	1936 - 7787		
2-Chloronaphthalene	<160	<1000	A					
2-Chlorophenol	3700	2962	A		0.94	596 - 5329		
2-Methylnaphthalene	<160	<1000	A					
2-Methylphenol	1000	747	A		0.76	75 - 1744		
2-Nitrophenol	<160	<1000	A					
4-Bromophenyl-phenylether	5300	4274	A		1.17	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2300	1881	A		0.81	321 - 3440		
4-Chlorophenyl-phenylether	6400	5002	A		1.30	1770 - 8234		
4-Methylphenol	<160	<1000	A					
4-Nitrophenol	<160	<1000	A					
Acenaphthene	<160	<1000	A					
Acenaphthylene	<160	<1000	A					
Anthracene	2500	2099	A		0.80	602 - 3596		
Benzo(a)anthracene	1400	1161	A		0.92	379 - 1943		
Benzo(a)pyrene	<160	<1000	A					
Benzo(b)fluoranthene	<160	<1000	A					
Benzo(g,h,i)perylene	<160	<1000	A					
Benzo(k)fluoranthene	<160	<1000	A					
bis(2-chloroethoxy)methane	2500	2149	A		0.64	493 - 3806		
bis(2-chloroethyl)ether	1700	1478	A		0.45	148 - 2956		
bis(2-chloroisopropyl)ether	<160	<1500	A					
Bis(2-ethylhexyl)phthalate	1300	<1500	A					
Butylbenzylphthalate	4900	3537	A		1.60	981 - 6094		
Chrysene	<160	<1000	A					
Di-n-butylphthalate	2500	2092	A		0.72	394 - 3790		
Di-n-octylphthalate	<160	<1500	A					
Dibenzo(a,h)anthracene	<160	<1000	A					
Dibenzofuran	<160	<1500	A					
Diethylphthalate	2600	2159	A		0.78	467 - 3852		
Dimethylphthalate	5300	4221	A		1.18	1476 - 6967		
Fluoranthene	3100	2521	A		1.14	995 - 4048		
Fluorene	<160	<1000	A					
Hexachlorobenzene	1500	1333	A		0.59	481 - 2184		
Hexachlorobutadiene	1900	1626	A		0.60	255 - 2996		
Hexachloroethane	3100	2691	A		0.45	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<160	<1000	A					
Isophorone	3800	3054	A		1.07	967 - 5141		
Naphthalene	4500	3932	A		0.61	1148 - 6716		
Nitrobenzene	5700	4287	A		1.29	1006 - 7568		
Pentachlorophenol	2500	2011	A		0.59	201 - 4497		
Phenanthrene	<160	<1000	A					
Phenol	<160	<1000	A					
Pyrene	1300	1067	A		1.01	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(WEST01) Lionville Laboratory
264 Welsh Pool Road
Exton, PA 19341-1313

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	225	197	A		0.66	72 - 322		
4,4'-DDE	193	184	A		0.25	70 - 297		
4,4'-DDT	<16.7	<50	A					
Aldrin	<16.7	<50	A					
alpha Chlordane	16.7	<50	A					
alpha-BHC	341	313	A		0.42	115 - 511		
beta-BHC	303	315	A		-0.15	80 - 550		
delta-BHC	<16.7	<50	A					
Dieldrin	<16.7	<50	A					
Endosulfan I	156	163	A		-0.21	59 - 268		
Endosulfan II	168	171	A		-0.07	57 - 284		
Endosulfan sulfate	476	502	A		-0.22	139 - 865		
Endrin	<16.7	<50	A					
Endrin Aldehyde	167	175	A		-0.15	23 - 326		
Endrin Ketone	<16.7	<50	A					
gamma Chlordane	<16.7	<50	A					
gamma-BHC (Lindane)	<16.7	<50	A					
Heptachlor	257	262	A		-0.09	95 - 428		
Heptachlor epoxide	<16.7	<50	A					
Methoxychlor	<16.7	<50	A					
1,2,4-Trichlorobenzene	1910	1779	A		0.27	351 - 3208		
1,2-Dichlorobenzene	<330	<1500	A					
1,3-Dichlorobenzene	2020	1806	A		0.32	181 - 3799		
1,4-Dichlorobenzene	1520	1339	A		0.39	134 - 2728		
2,4,5-Trichlorophenol	2180	1892	A		0.56	347 - 3437		
2,4,6-Trichlorophenol	1840	1994	A		-0.28	321 - 3668		
2,4-Dichlorophenol	3860	3952	A		-0.09	902 - 7003		
2,4-Dinitrophenol	<1650	<600	A	(19)				
2,4-Dinitrotoluene	3080	3083	A		0.00	574 - 5592		
2,6-Dinitrotoluene	4410	4861	A		-0.46	1936 - 7787		
2-Chloronaphthalene	<330	<1000	A					
2-Chlorophenol	2930	2962	A		-0.04	596 - 5329		
2-Methylnaphthalene	<330	<1000	A					
2-Methylphenol	900	747	A		0.46	75 - 1744		
2-Nitrophenol	<330	<1000	A					
4-Bromophenyl-phenylether	3940	4274	A		-0.38	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2070	1881	A		0.36	321 - 3440		
4-Chlorophenyl-phenylether	4740	5002	A		-0.24	1770 - 8234		
4-Methylphenol	<330	<1000	A					
4-Nitrophenol	<1650	<1000	A	(19)				
Acenaphthene	<330	<1000	A					
Acenaphthylene	<330	<1000	A					
Anthracene	2180	2099	A		0.16	602 - 3596		
Benzo(a)anthracene	1180	1161	A		0.07	379 - 1943		
Benzo(a)pyrene	<330	<1000	A					
Benzo(b)fluoranthene	<330	<1000	A					
Benzo(g,h,i)perylene	<330	<1000	A					
Benzo(k)fluoranthene	<330	<1000	A					
bis(2-chloroethoxy)methane	2170	2149	A		0.04	493 - 3806		
bis(2-chloroethyl)ether	1650	1478	A		0.35	148 - 2956		
bis(2-chloroisopropyl)ether	<330	<1500	A					
Bis(2-ethylhexyl)phthalate	5910	<1500	N					
Butylbenzylphthalate	3530	3537	A		-0.01	981 - 6094		
Chrysene	<330	<1000	A					
Di-n-butylphthalate	2210	2092	A		0.21	394 - 3790		
Di-n-octylphthalate	<330	<1500	A					
Dibenzo(a,h)anthracene	<330	<1000	A					
Dibenzofuran	<330	<1500	A					
Diethylphthalate	2420	2159	A		0.46	467 - 3852		
Dimethylphthalate	4170	4221	A		-0.06	1476 - 6967		
Fluoranthene	2650	2521	A		0.25	995 - 4048		
Fluorene	<330	<1000	A					
Hexachlorobenzene	1410	1333	A		0.27	481 - 2184		
Hexachlorobutadiene	1790	1626	A		0.36	255 - 2996		
Hexachloroethane	2840	2691	A		0.16	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<330	<1000	A					
Isophorone	2990	3054	A		-0.09	967 - 5141		
Naphthalene	3810	3932	A		-0.13	1148 - 6716		
Nitrobenzene	4210	4287	A		-0.07	1006 - 7568		
Pentachlorophenol	2210	2011	A		0.24	201 - 4497		
Phenanthrene	<330	<1000	A					
Phenol	<330	<1000	A					
Pyrene	1010	1067	A		-0.25	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-12-OrS27
(WEST03) Waste Sampling and Characterization Facility, MSA
PO Box 650, S3-30
Richland, WA 99352

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4,4'-DDD	NR	197				72 - 322		
4,4'-DDE	NR	184				70 - 297		
4,4'-DDT	NR	<50						
Aldrin	NR	<50						
alpha Chlordane	NR	<50						
alpha-BHC	NR	313				115 - 511		
beta-BHC	NR	315				80 - 550		
delta-BHC	NR	<50						
Dieldrin	NR	<50						
Endosulfan I	NR	163				59 - 268		
Endosulfan II	NR	171				57 - 284		
Endosulfan sulfate	NR	502				139 - 865		
Endrin	NR	<50						
Endrin Aldehyde	NR	175				23 - 326		
Endrin Ketone	NR	<50						
gamma Chlordane	NR	<50						
gamma-BHC (Lindane)	NR	<50						
Heptachlor	NR	262				95 - 428		
Heptachlor epoxide	NR	<50						
Methoxychlor	NR	<50						
1,2,4-Trichlorobenzene	2500	1779	A		1.51	351 - 3208		
1,2-Dichlorobenzene	<250	<1500	A					
1,3-Dichlorobenzene	2650	1806	A		1.27	181 - 3799		
1,4-Dichlorobenzene	2030	1339	A		1.49	134 - 2728		
2,4,5-Trichlorophenol	2270	1892	A		0.73	347 - 3437		
2,4,6-Trichlorophenol	2600	1994	A		1.09	321 - 3668		
2,4-Dichlorophenol	5000	3952	A		1.03	902 - 7003		
2,4-Dinitrophenol	<250	<600	A					
2,4-Dinitrotoluene	3900	3083	A		0.98	574 - 5592		
2,6-Dinitrotoluene	5840	4861	A		1.00	1936 - 7787		
2-Chloronaphthalene	<250	<1000	A					
2-Chlorophenol	4030	2962	A		1.35	596 - 5329		
2-Methylnaphthalene	<250	<1000	A					
2-Methylphenol	1170	747	A		1.27	75 - 1744		
2-Nitrophenol	<250	<1000	A					
4-Bromophenyl-phenylether	4990	4274	A		0.82	1652 - 6896		

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
4-Chloro-3-methylphenol	2360	1881	A		0.92	321 - 3440		
4-Chlorophenyl-phenylether	6210	5002	A		1.12	1770 - 8234		
4-Methylphenol	<250	<1000	A					
4-Nitrophenol	<250	<1000	A					
Acenaphthene	<250	<1000	A					
Acenaphthylene	<250	<1000	A					
Anthracene	2650	2099	A		1.11	602 - 3596		
Benzo(a)anthracene	1420	1161	A		0.99	379 - 1943		
Benzo(a)pyrene	<250	<1000	A					
Benzo(b)fluoranthene	<250	<1000	A					
Benzo(g,h,i)perylene	<250	<1000	A					
Benzo(k)fluoranthene	<250	<1000	A					
bis(2-chloroethoxy)methane	2870	2149	A		1.31	493 - 3806		
bis(2-chloroethyl)ether	1930	1478	A		0.92	148 - 2956		
bis(2-chloroisopropyl)ether	<250	<1500	A					
Bis(2-ethylhexyl)phthalate	1120	<1500	A					
Butylbenzylphthalate	4470	3537	A		1.09	981 - 6094		
Chrysene	<250	<1000	A					
Di-n-butylphthalate	2500	2092	A		0.72	394 - 3790		
Di-n-octylphthalate	<250	<1500	A					
Dibenzo(a,h)anthracene	<250	<1000	A					
Dibenzofuran	<250	<1500	A					
Diethylphthalate	2700	2159	A		0.96	467 - 3852		
Dimethylphthalate	5120	4221	A		0.98	1476 - 6967		
Fluoranthene	2940	2521	A		0.82	995 - 4048		
Fluorene	<250	<1000	A					
Hexachlorobenzene	1620	1333	A		1.01	481 - 2184		
Hexachlorobutadiene	2270	1626	A		1.41	255 - 2996		
Hexachloroethane	3980	2691	A		1.42	269 - 5410		
Indeno(1,2,3-c,d)pyrene	<250	<1000	A					
Isophorone	3920	3054	A		1.25	967 - 5141		
Naphthalene	5280	3932	A		1.45	1148 - 6716		
Nitrobenzene	5830	4287	A		1.41	1006 - 7568		
Pentachlorophenol	2440	2011	A		0.52	201 - 4497		
Phenanthrene	<250	<1000	A					
Phenol	<250	<1000	A					
Pyrene	1350	1067	A		1.23	373 - 1760		

NOTE: The spiking solution used to create the MAPEP OrS standard was prepared and validated by RESL Chemists.

Criteria based on FoPT Table for SCM - Jan 3, 2012

Organic								Units: (ug/kg)
Analyte	Result	Calc Mean	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag

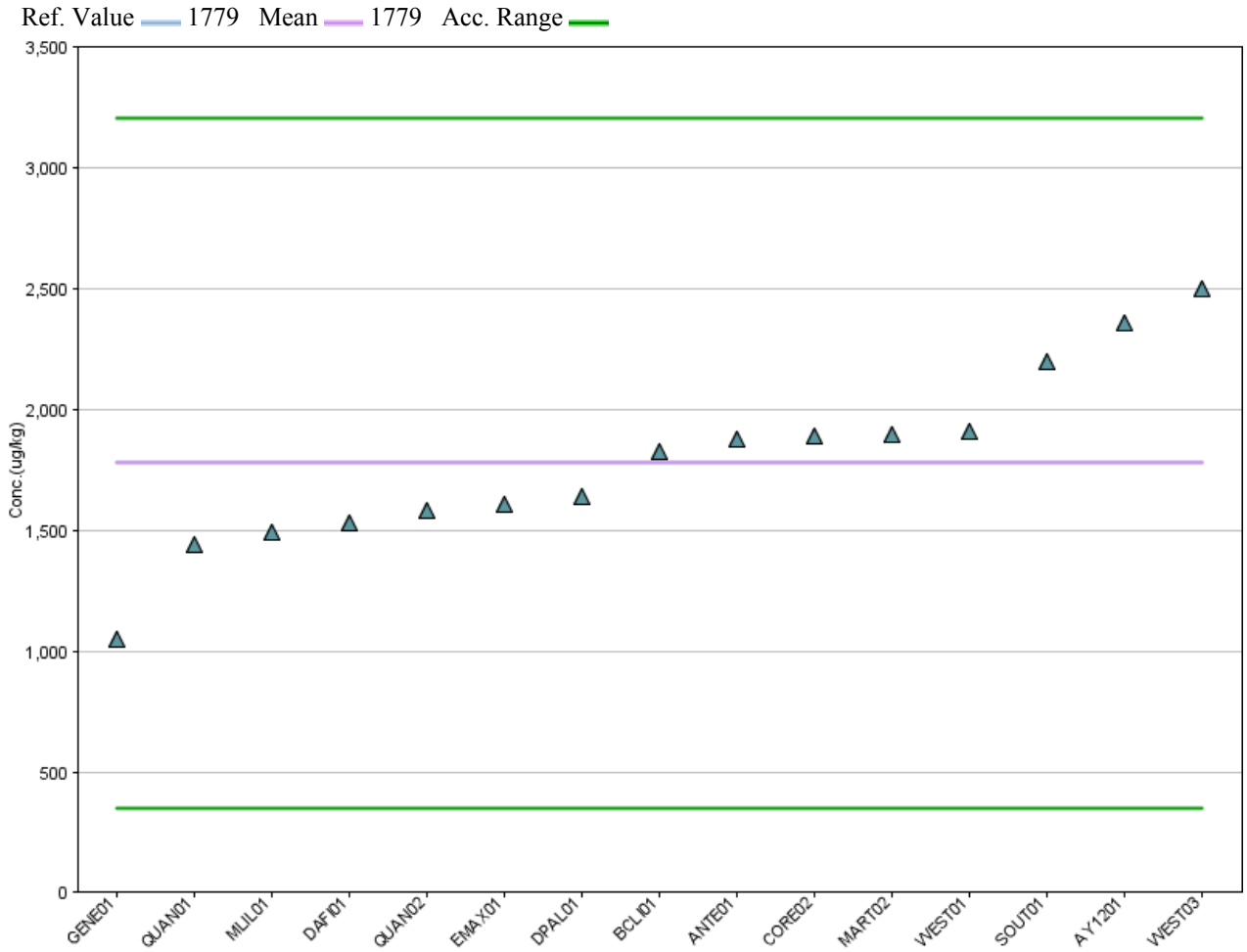
A = Result acceptable Z-score <=3.0
N = Result not acceptable Z-score > 3.0
W = Check reported result for error.
NR = Not Reported

Notes:

(19) = Detection Limit Concern

1,2,4-Trichlorobenzene

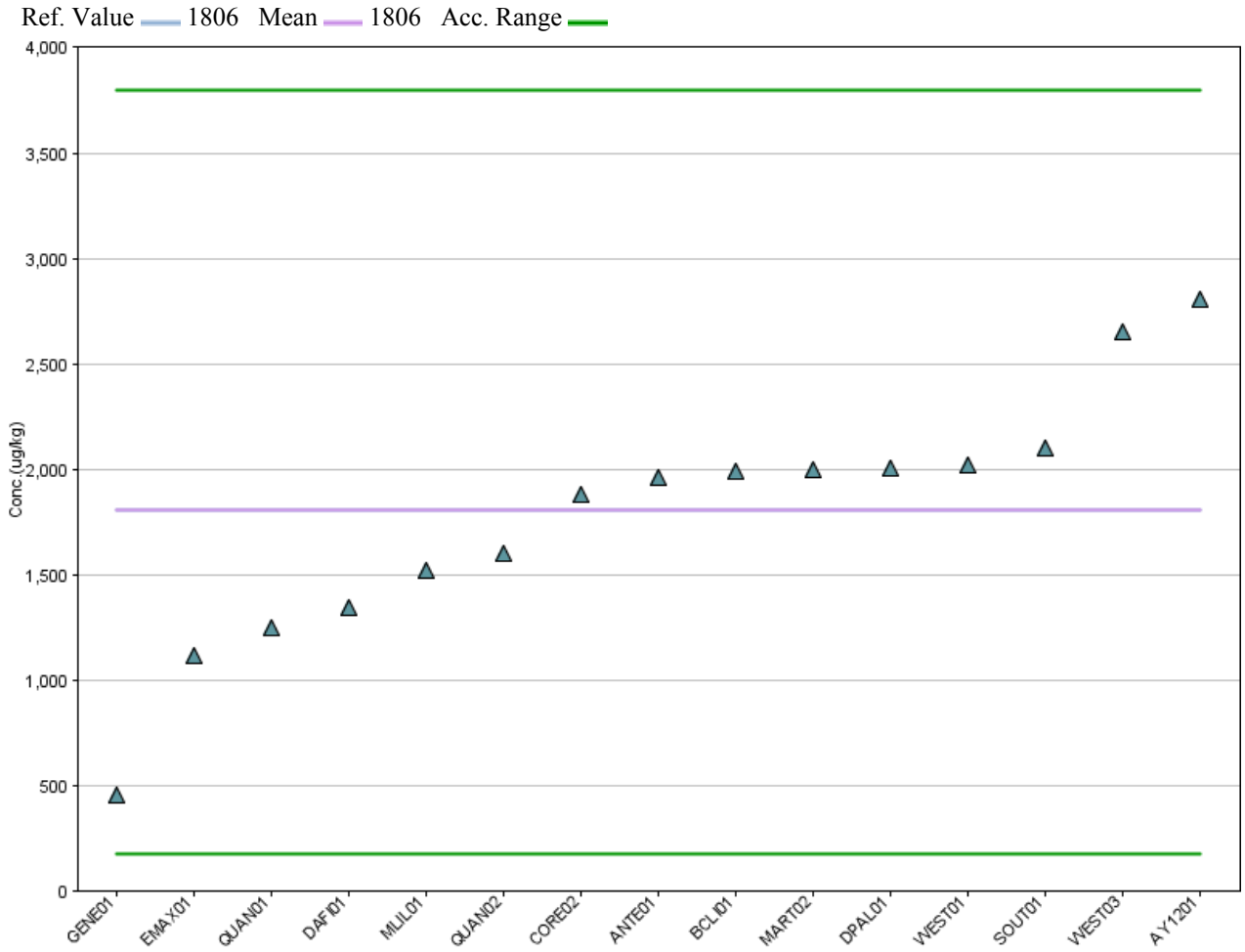
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,167.00 (±5 Standard Deviations)

1,3-Dichlorobenzene

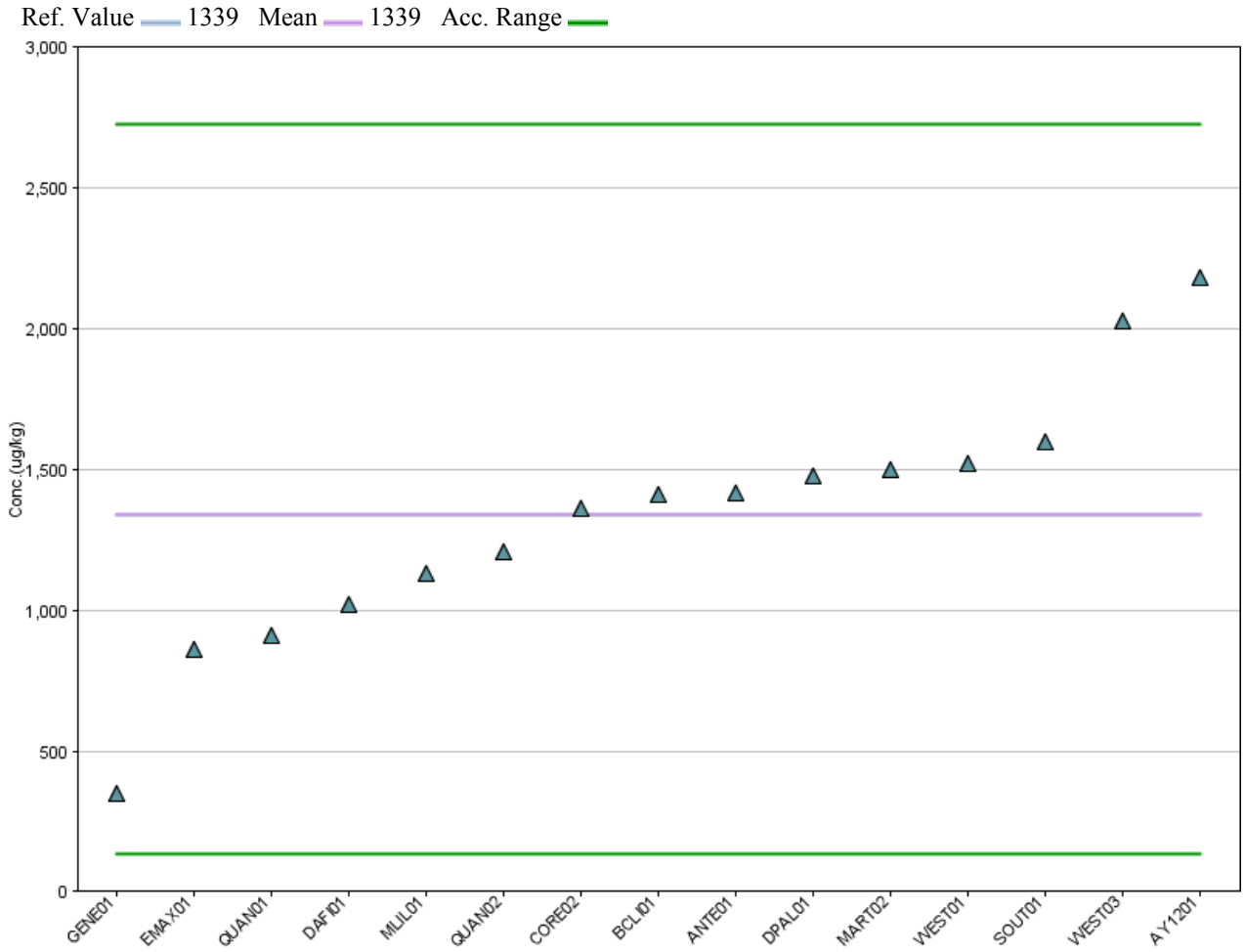
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 5,101.00 (±5 Standard Deviations)

1,4-Dichlorobenzene

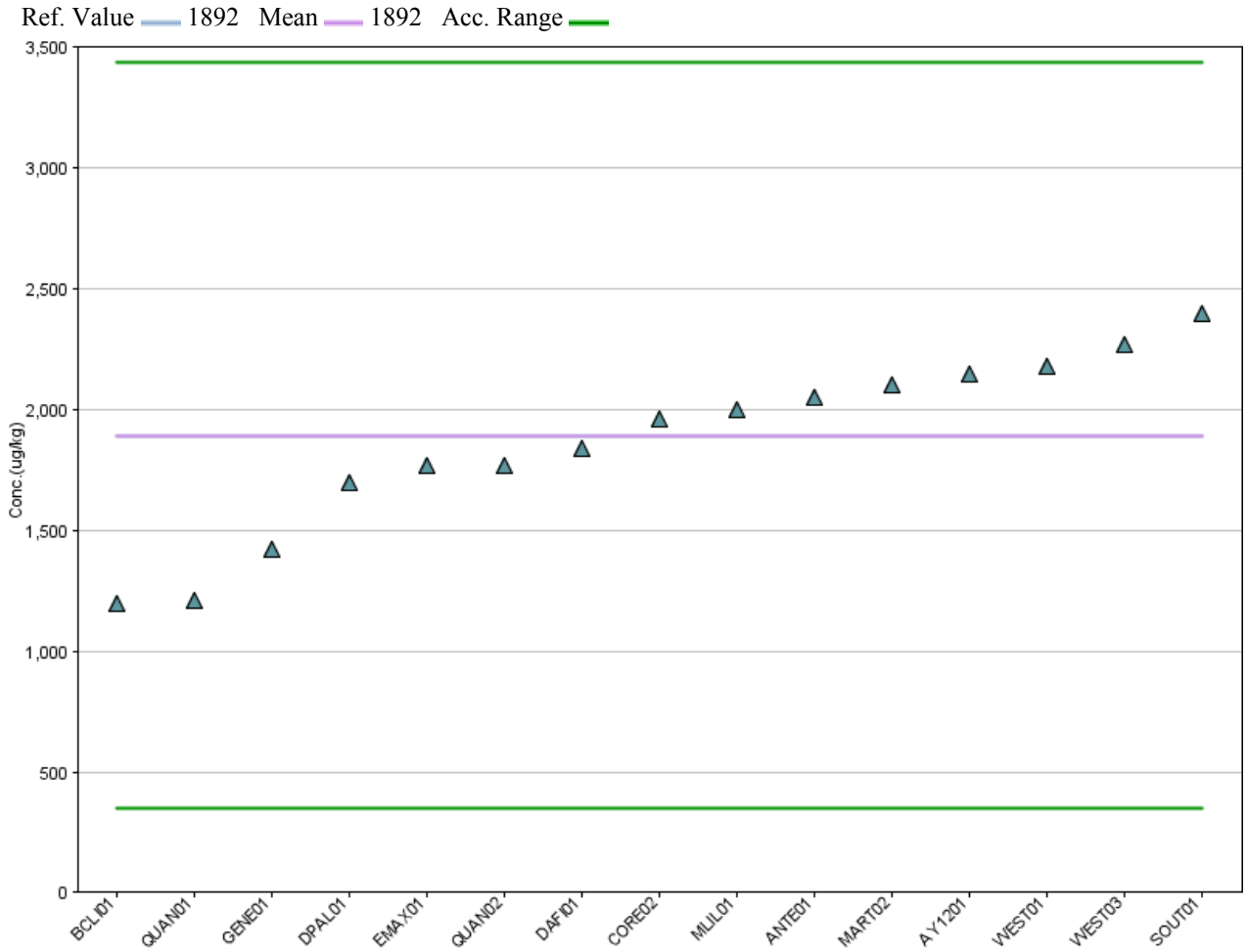
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 3,647.00 (±5 Standard Deviations)

2,4,5-Trichlorophenol

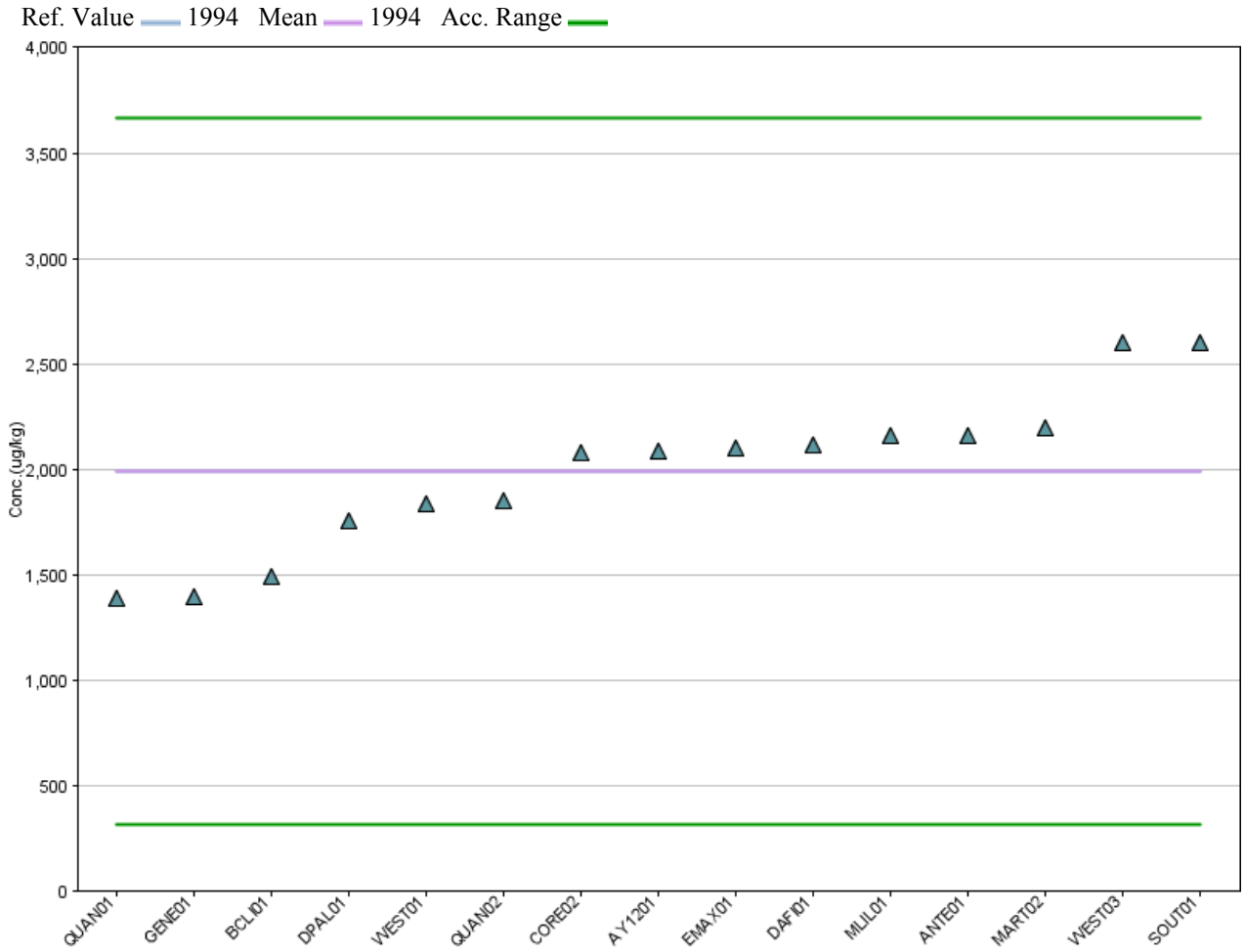
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,443.00 (±5 Standard Deviations)

2,4,6-Trichlorophenol

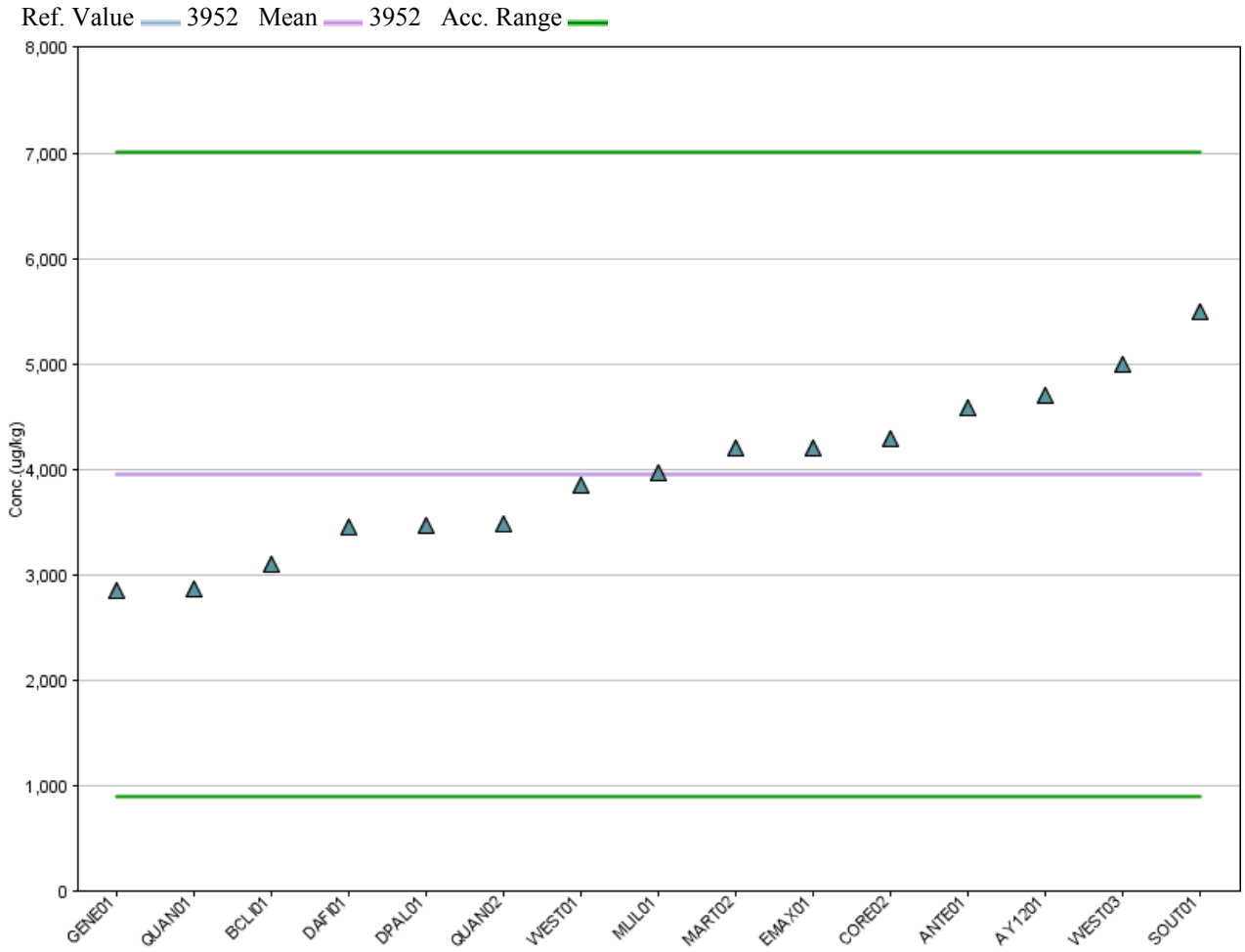
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,779.00 (±5 Standard Deviations)

2,4-Dichlorophenol

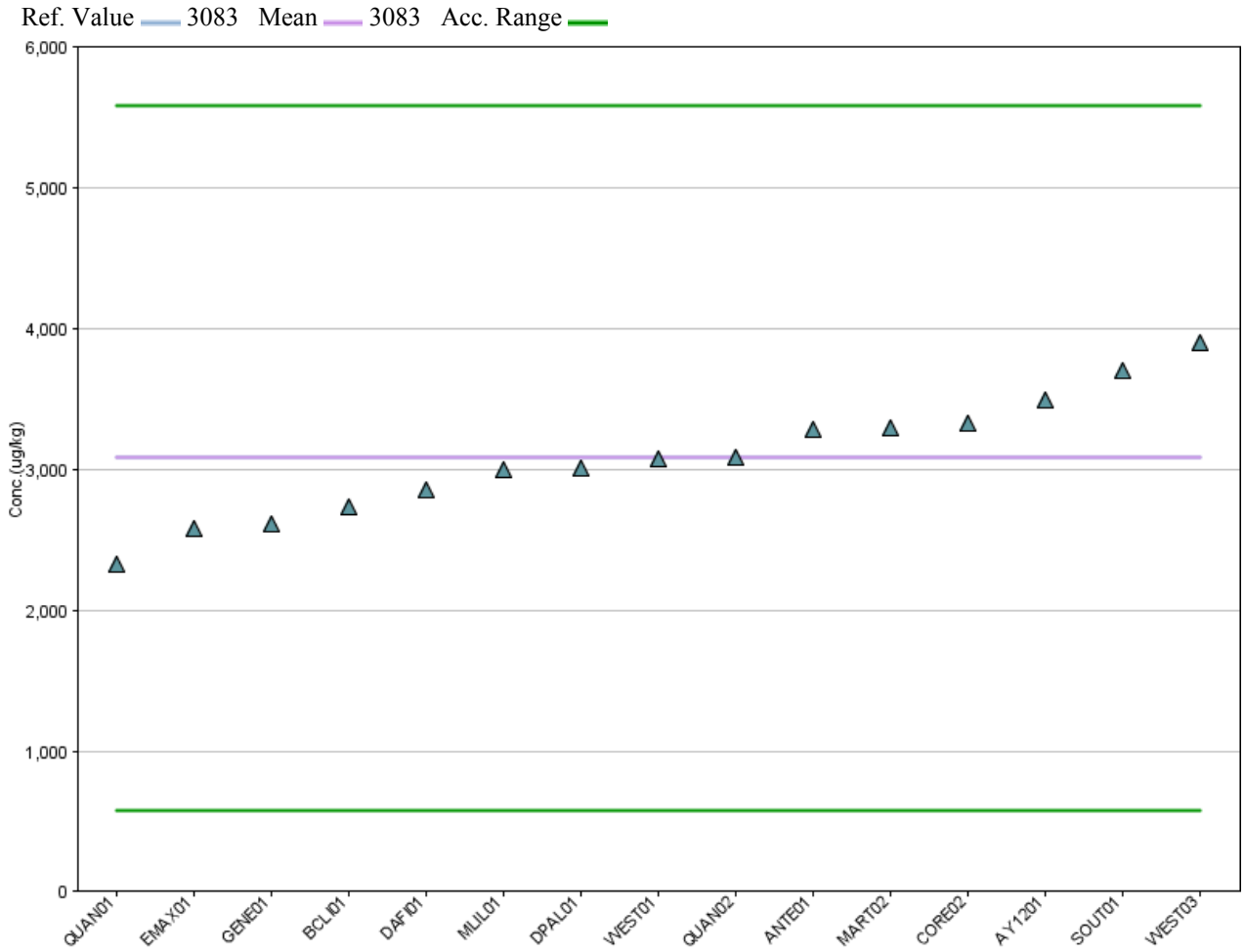
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 9,056.00 (±5 Standard Deviations)

2,4-Dinitrotoluene

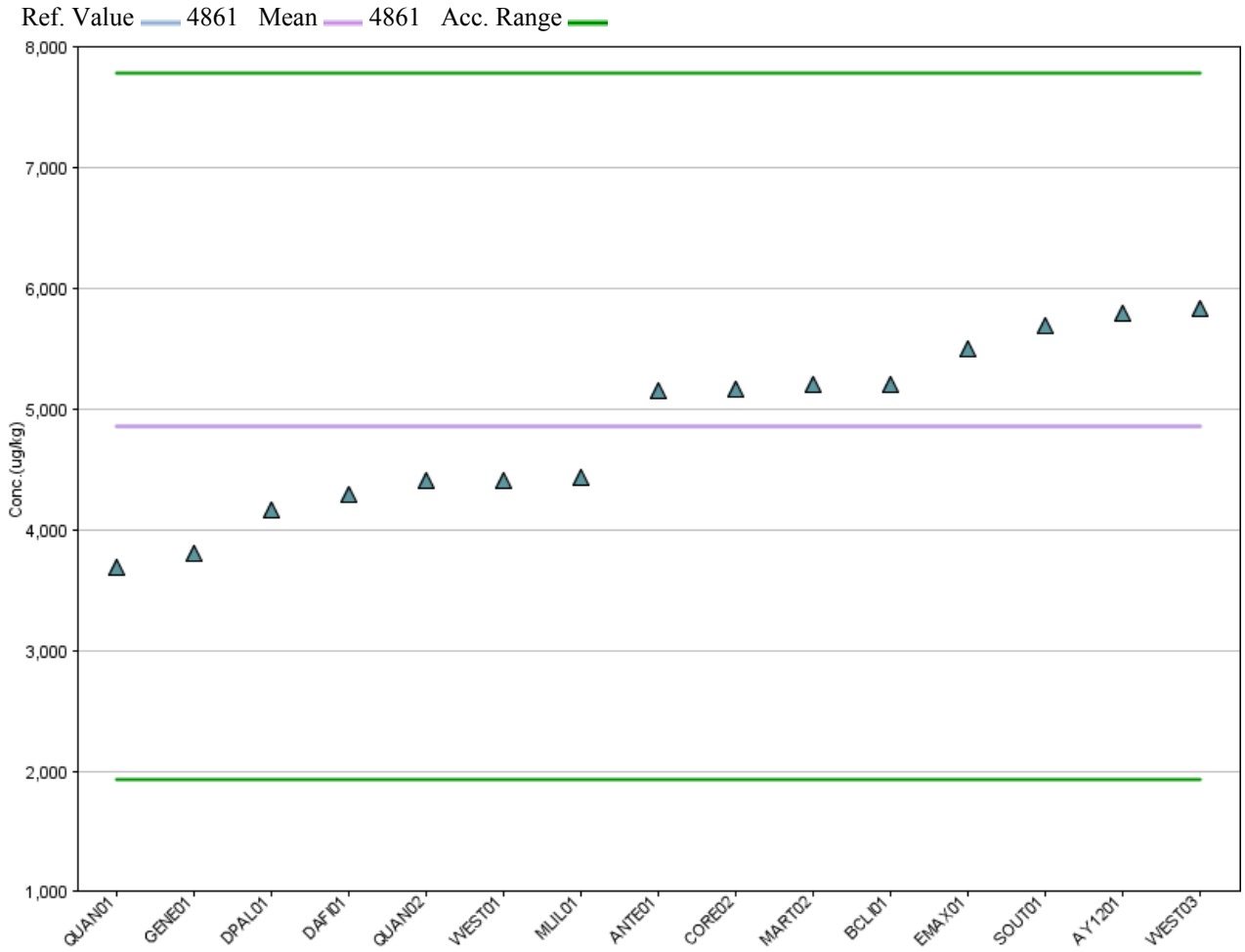
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 7,268.00 (±5 Standard Deviations)

2,6-Dinitrotoluene

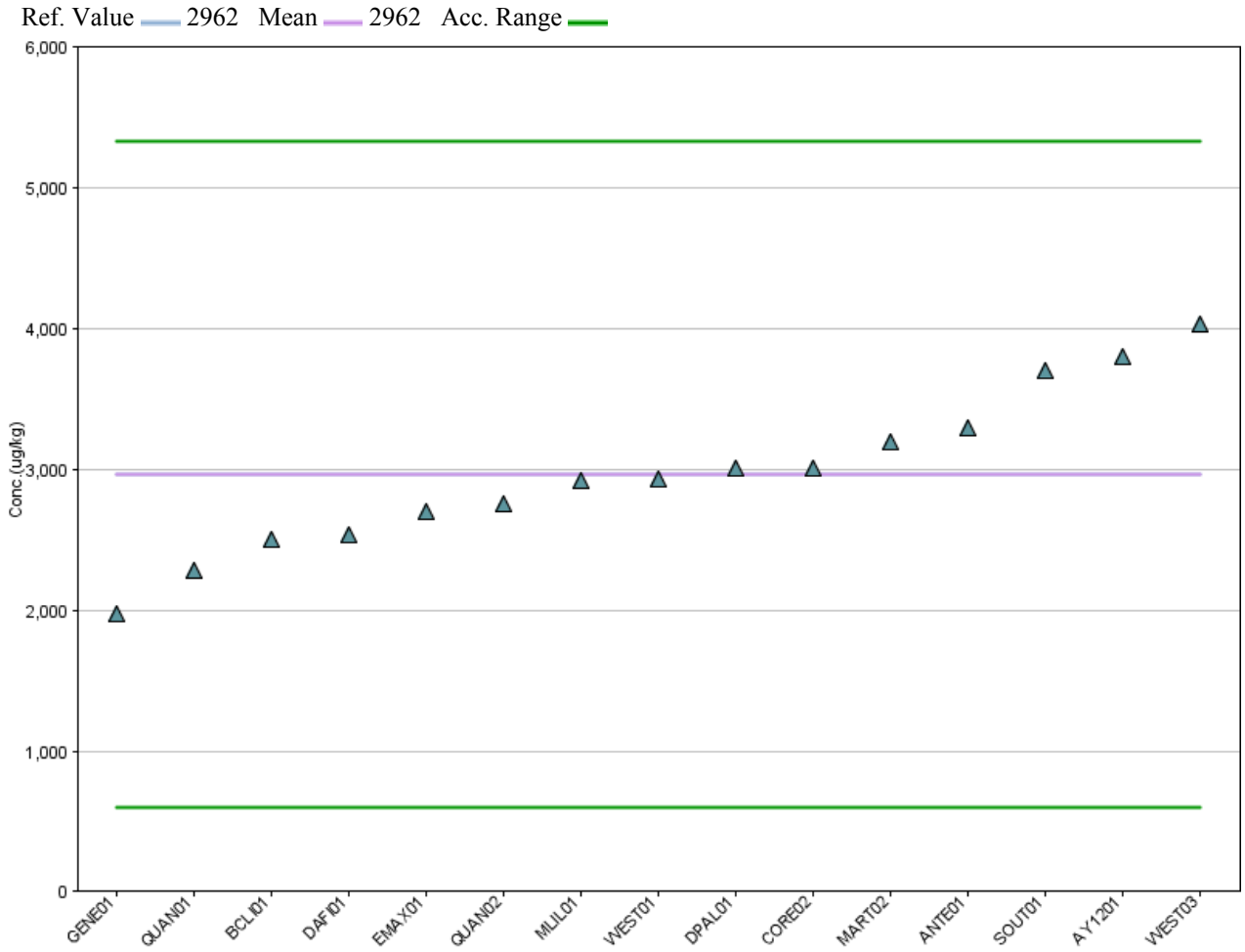
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 9,728.00 (±5 Standard Deviations)

2-Chlorophenol

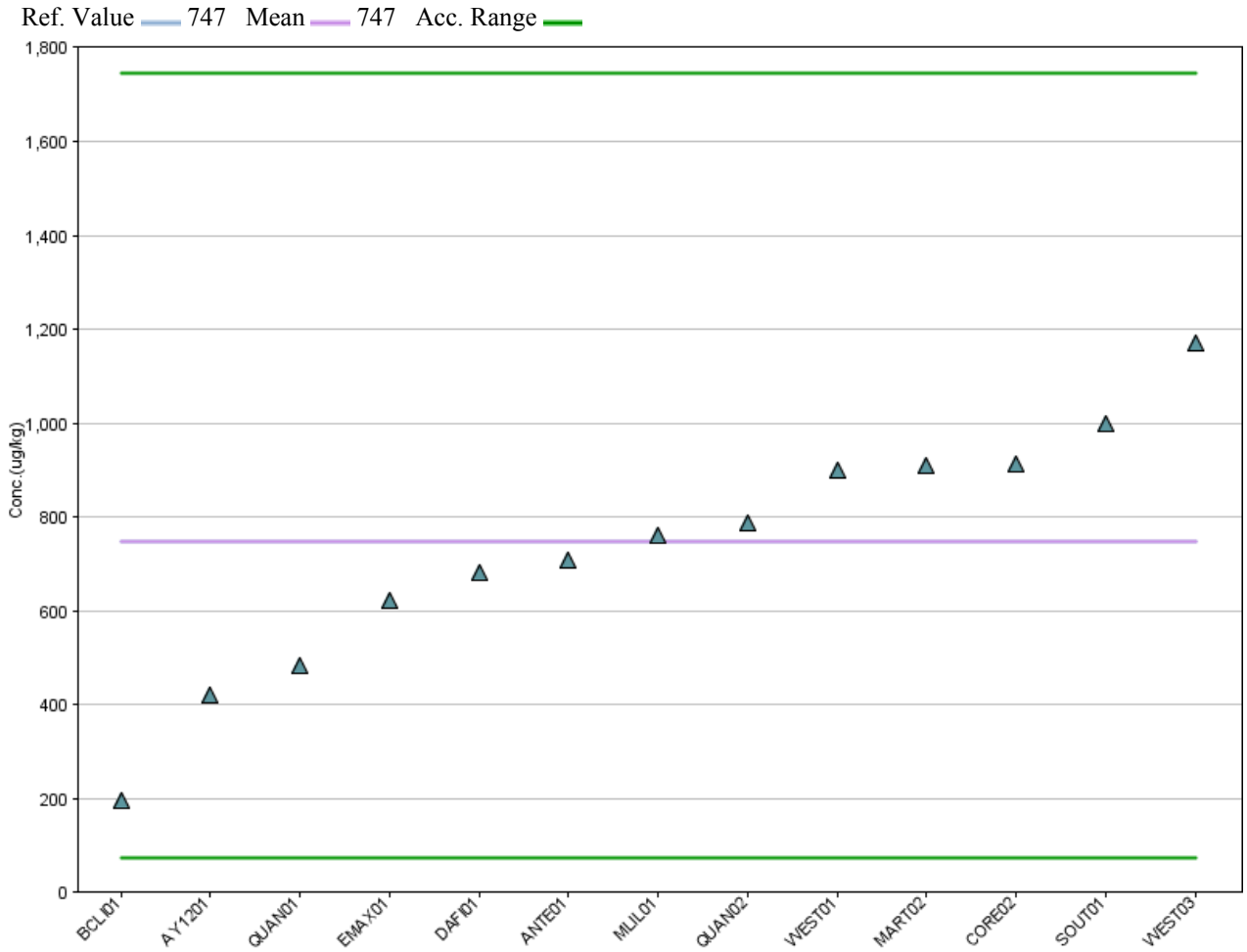
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 6,923.00 (±5 Standard Deviations)

2-Methylphenol

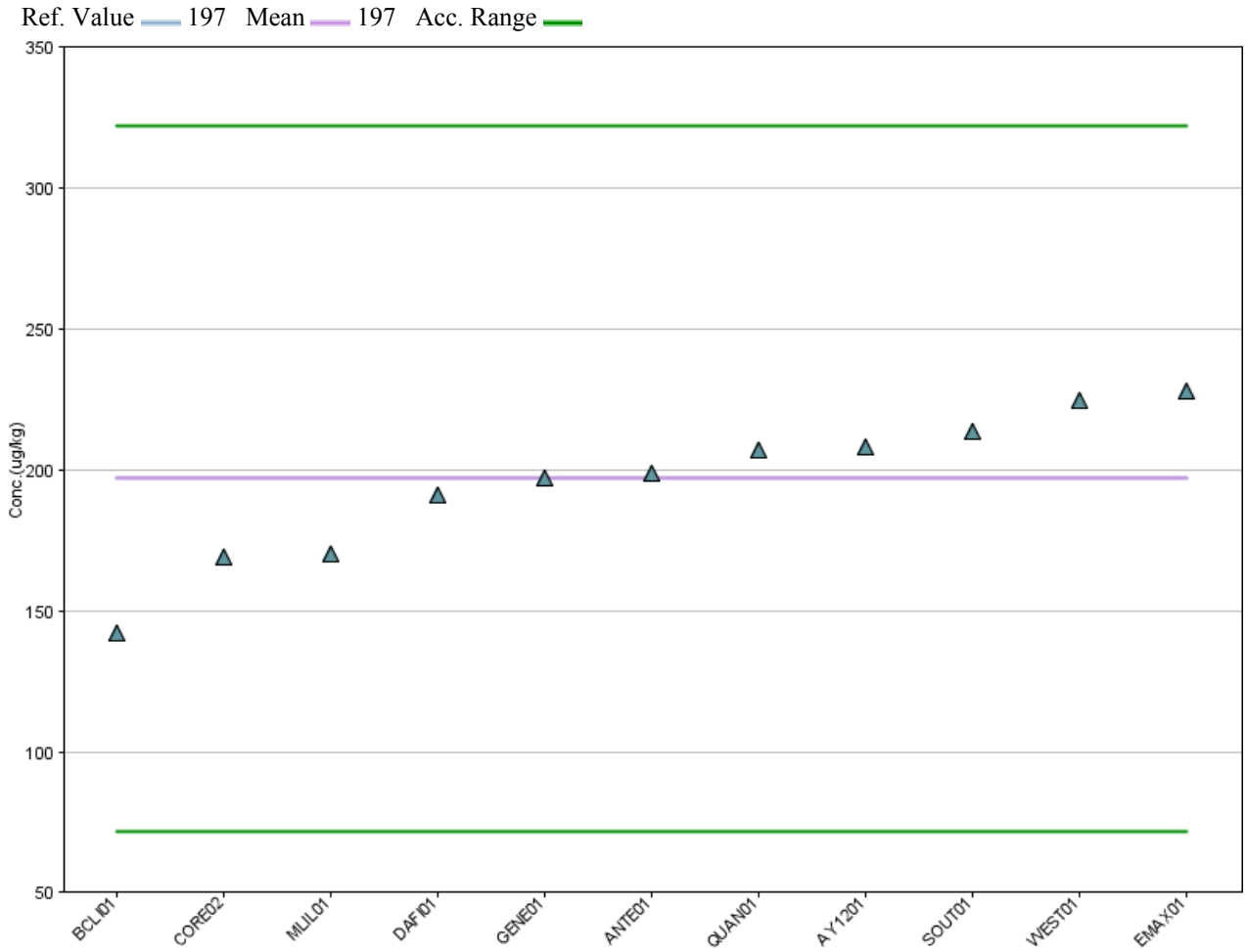
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 2,395.00 (±5 Standard Deviations)

4,4'-DDD

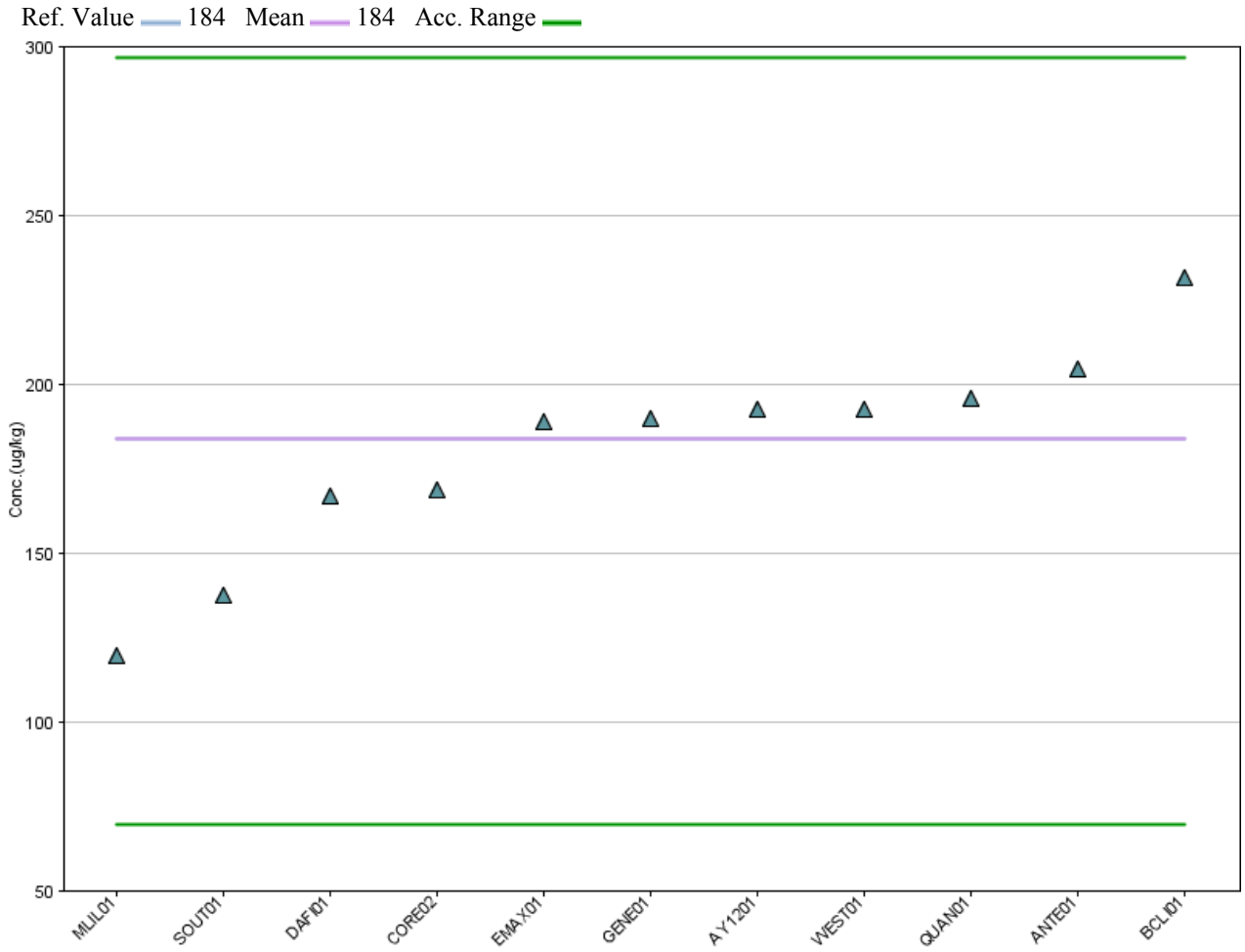
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 405.00 (±5 Standard Deviations)

4,4'-DDE

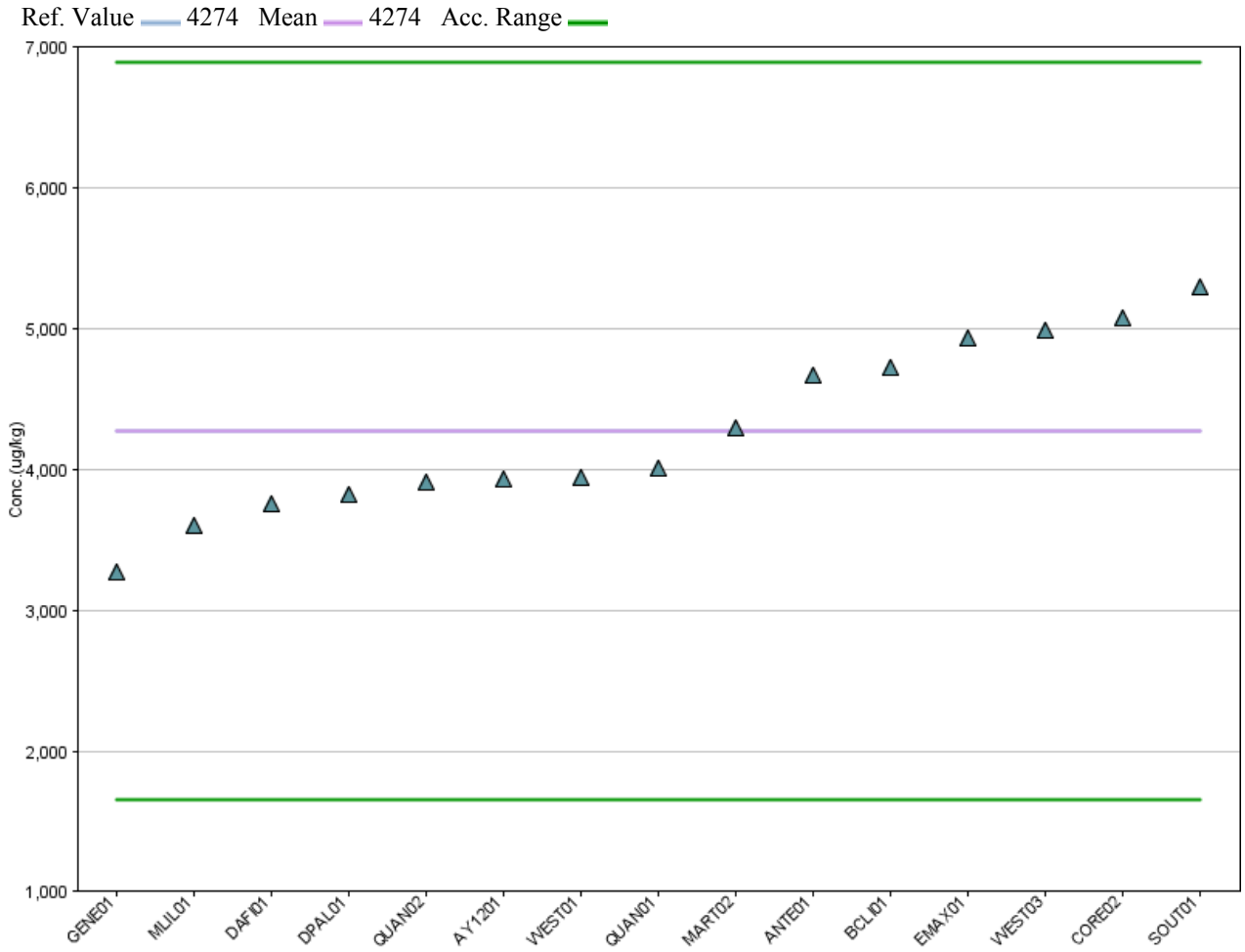
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 371.00 (±5 Standard Deviations)

4-Bromophenyl-phenylether

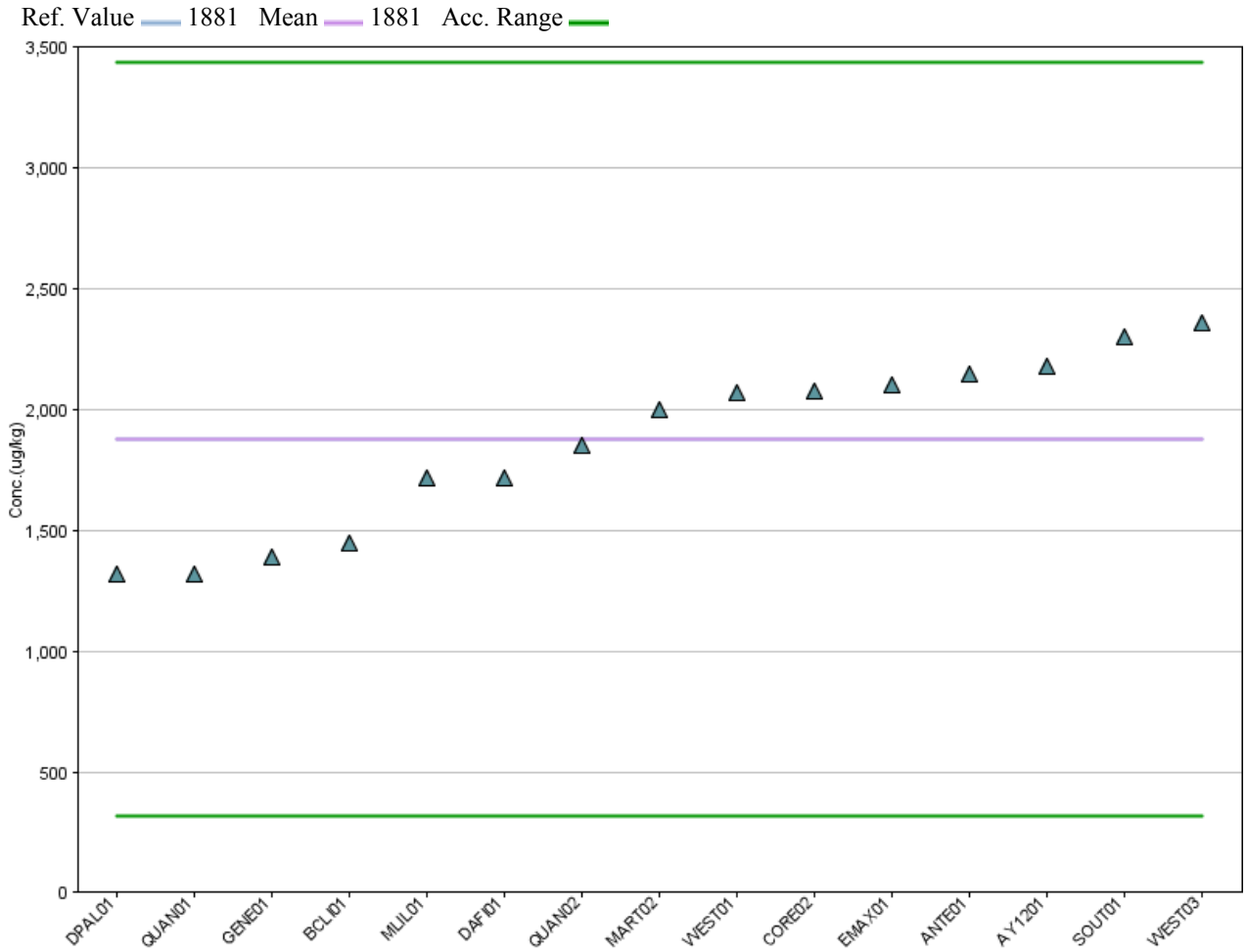
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 8,653.00 (±5 Standard Deviations)

4-Chloro-3-methylphenol

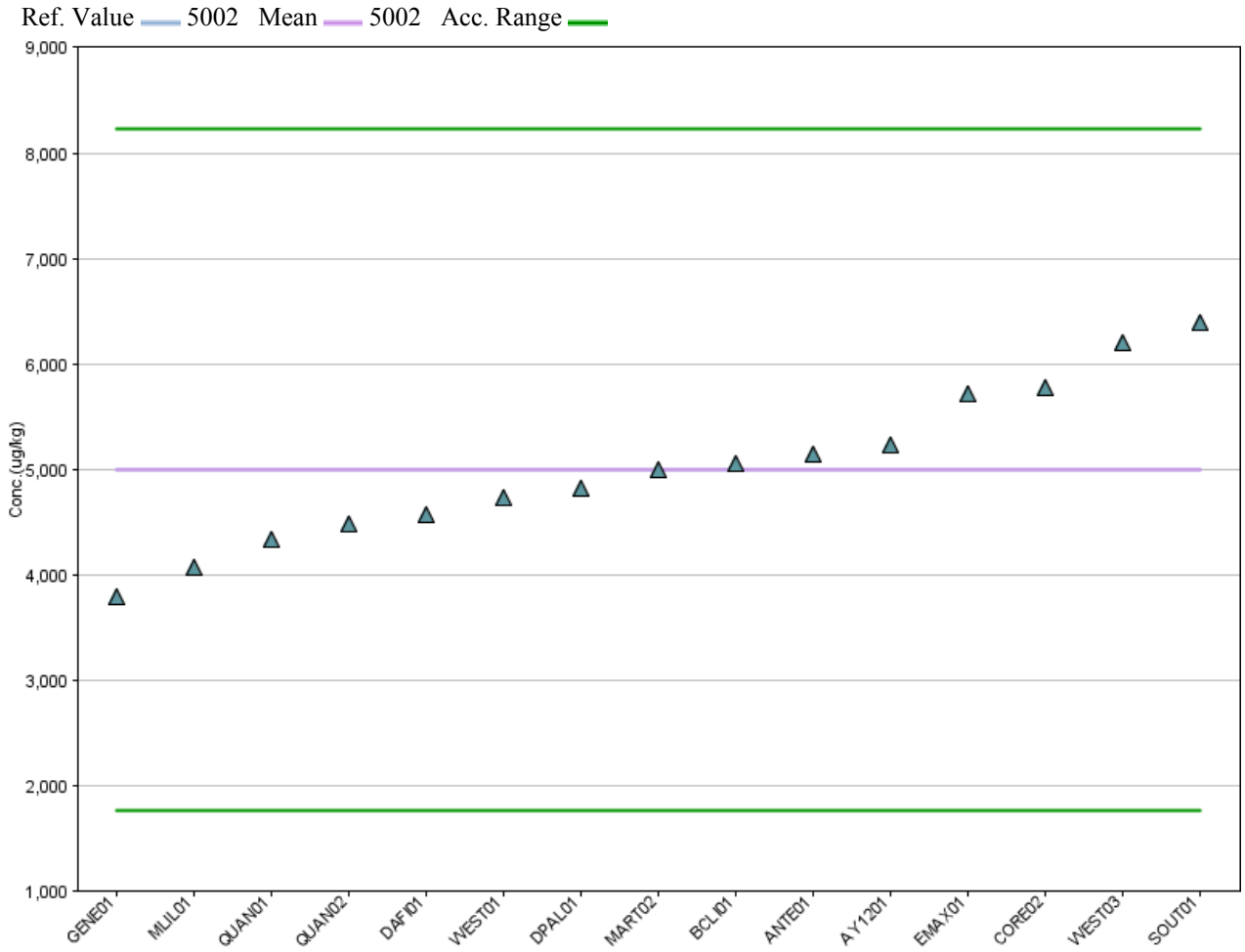
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,467.00 (±5 Standard Deviations)

4-Chlorophenyl-phenylether

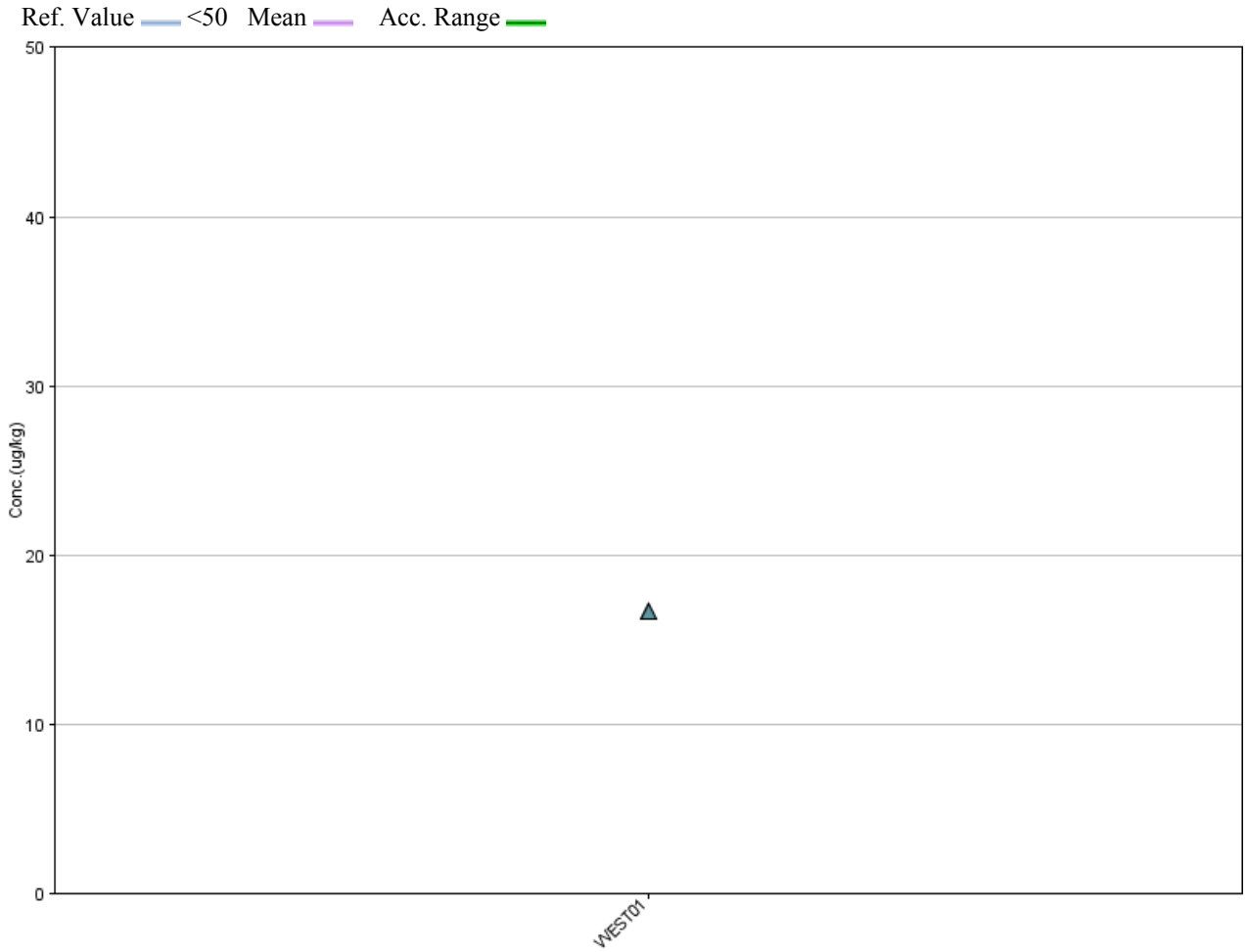
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 10,412.00 (±5 Standard Deviations)

alpha Chlordane

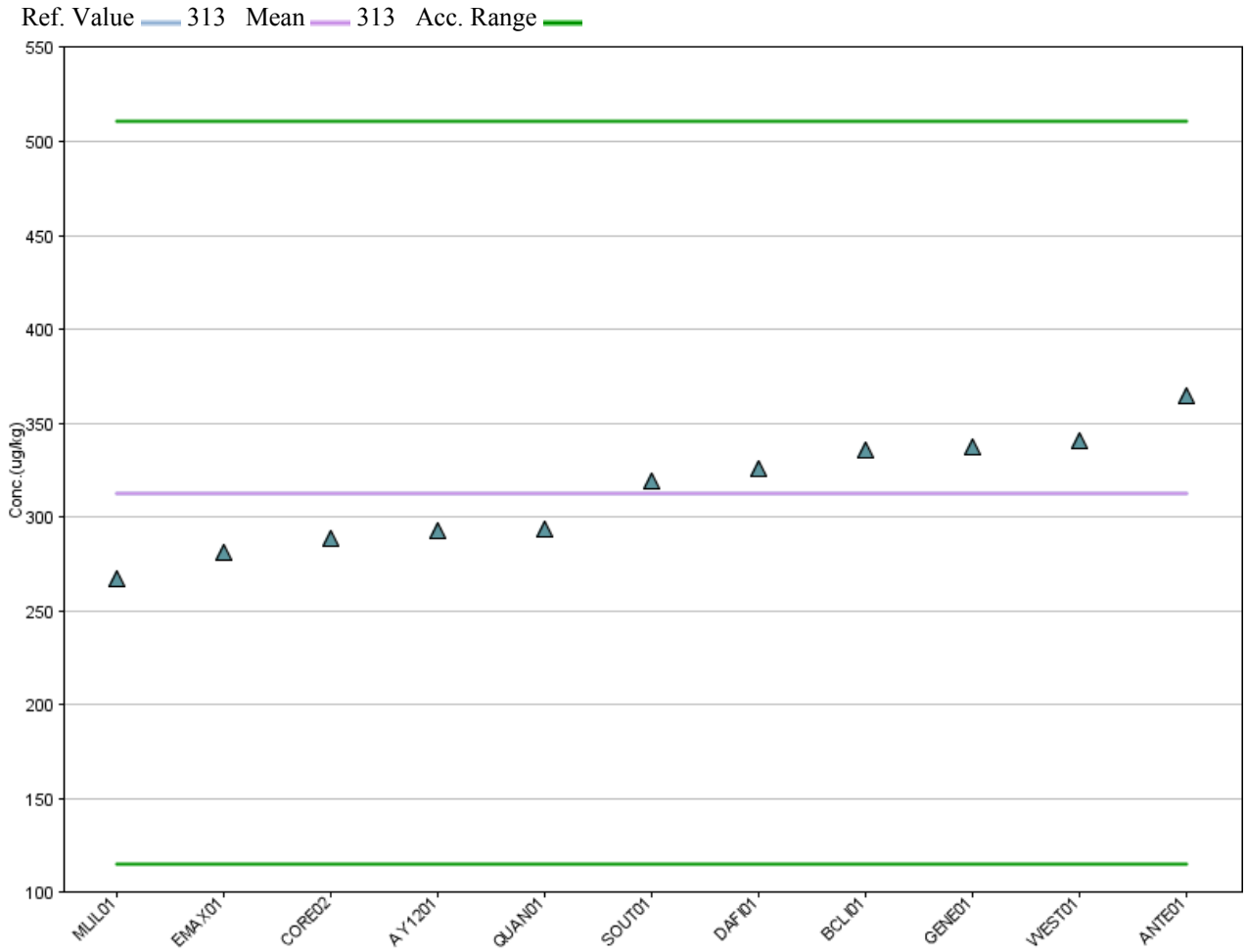
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 55.00 (±5 Standard Deviations)

alpha-BHC

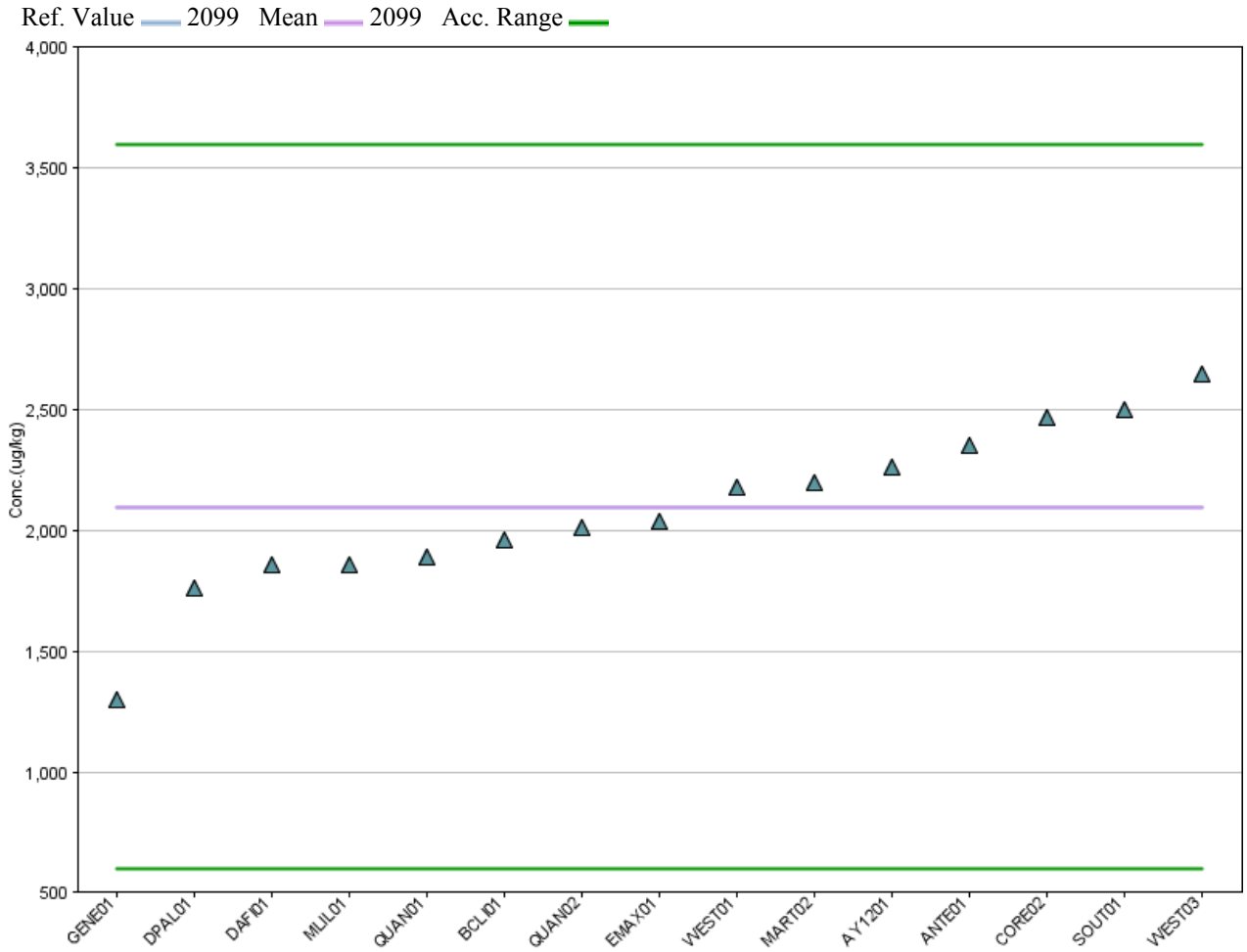
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 643.00 (±5 Standard Deviations)

Anthracene

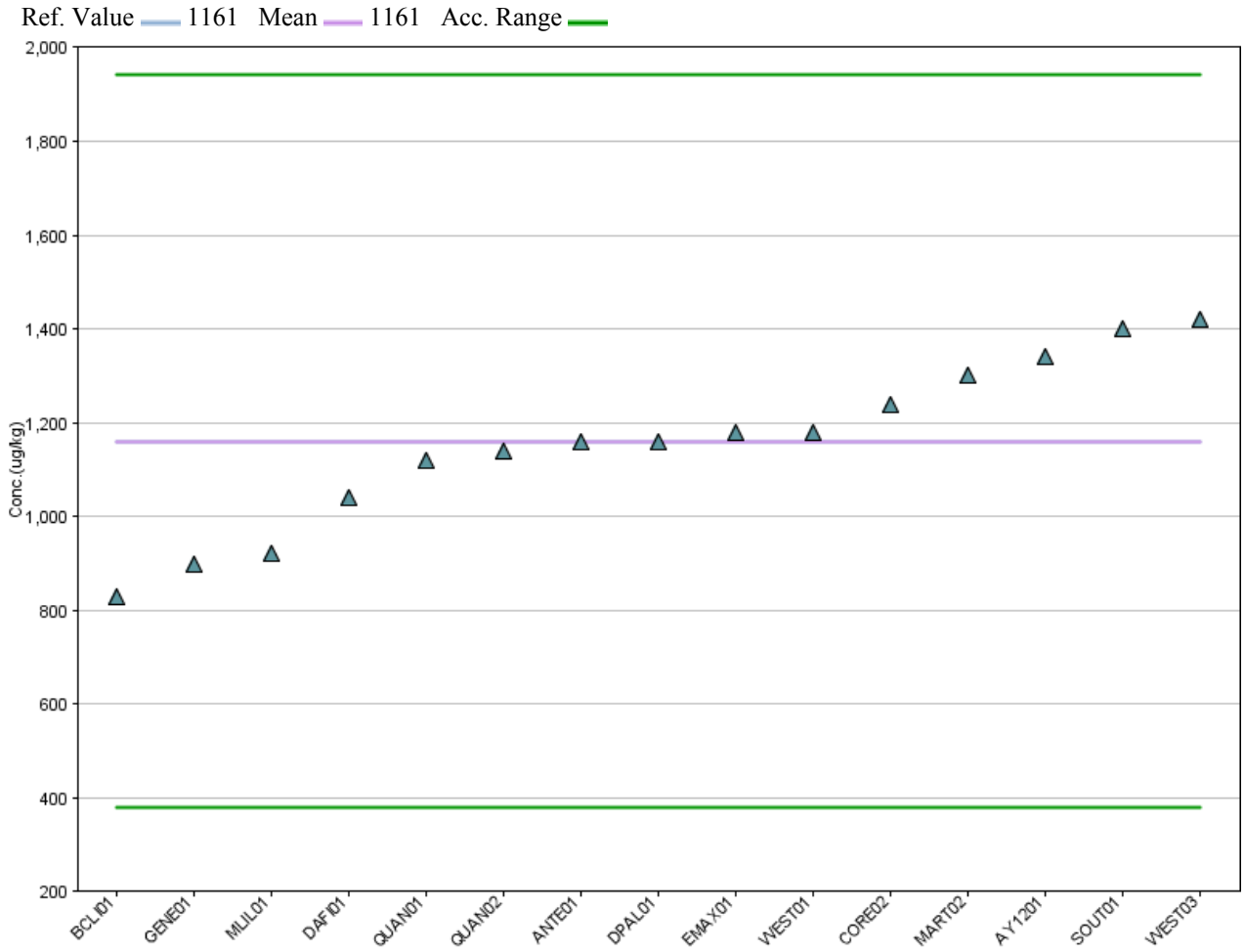
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,581.00 (±5 Standard Deviations)

Benzo(a)anthracene

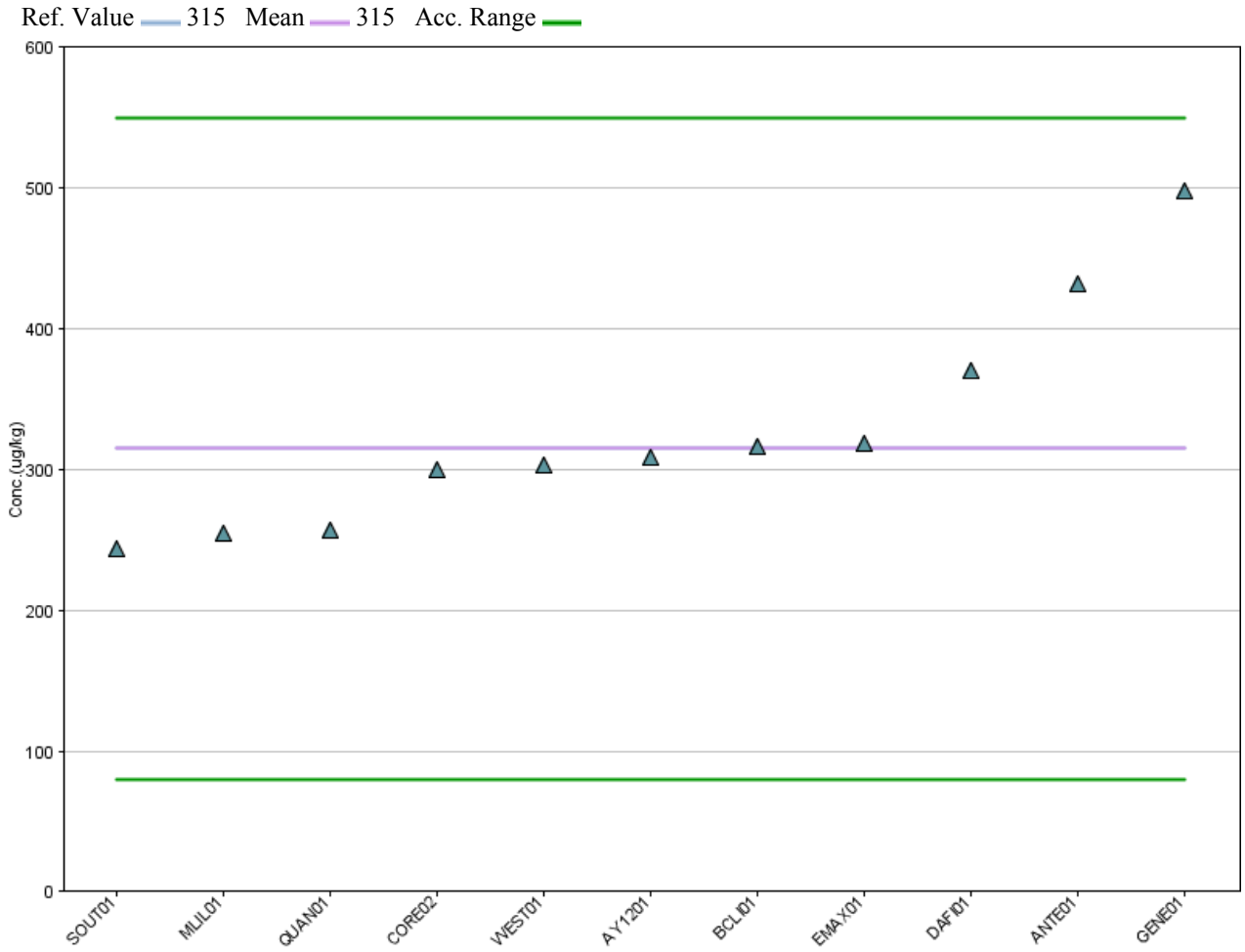
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 2,460.00 (±5 Standard Deviations)

beta-BHC

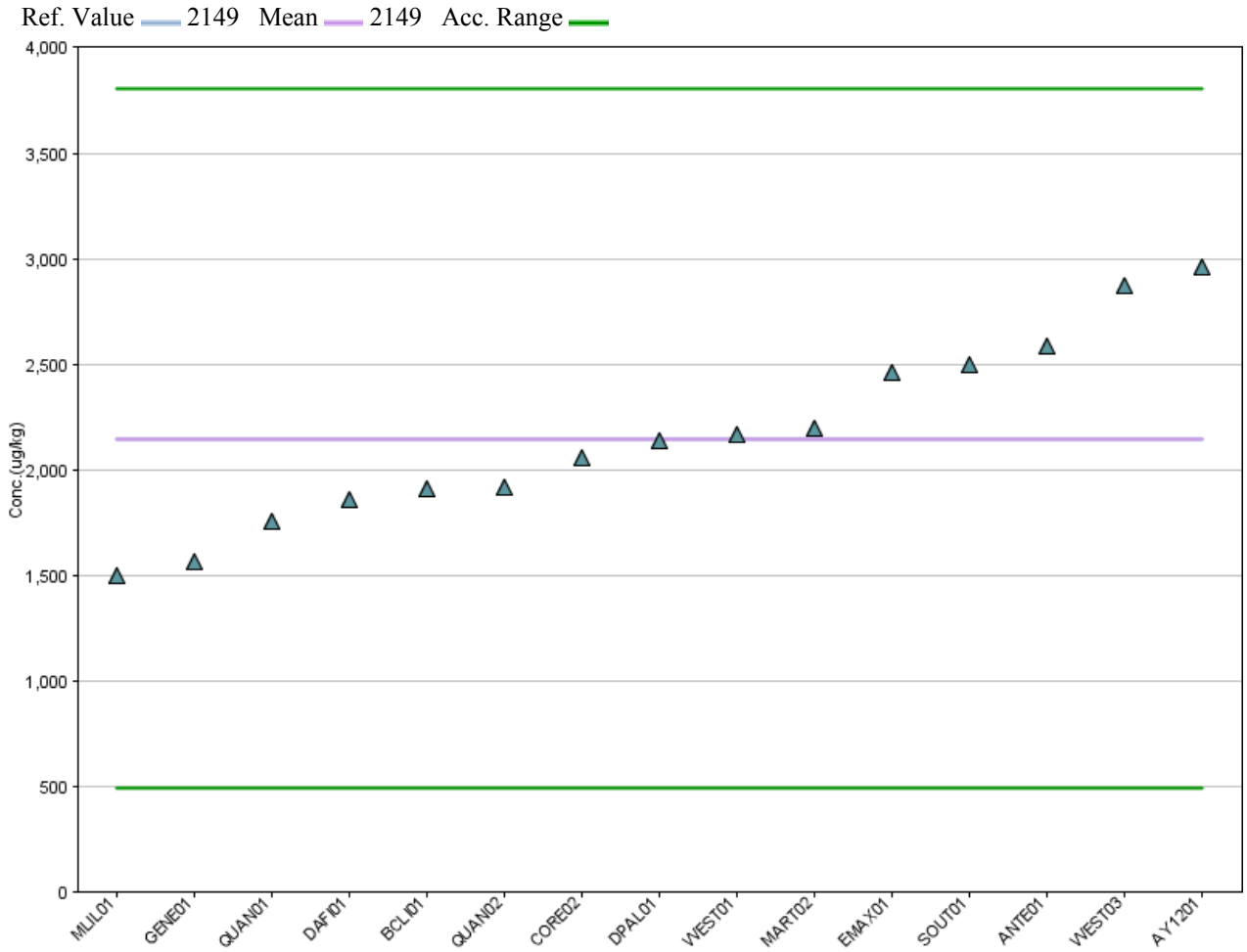
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 718.00 (±5 Standard Deviations)

bis(2-chloroethoxy)methane

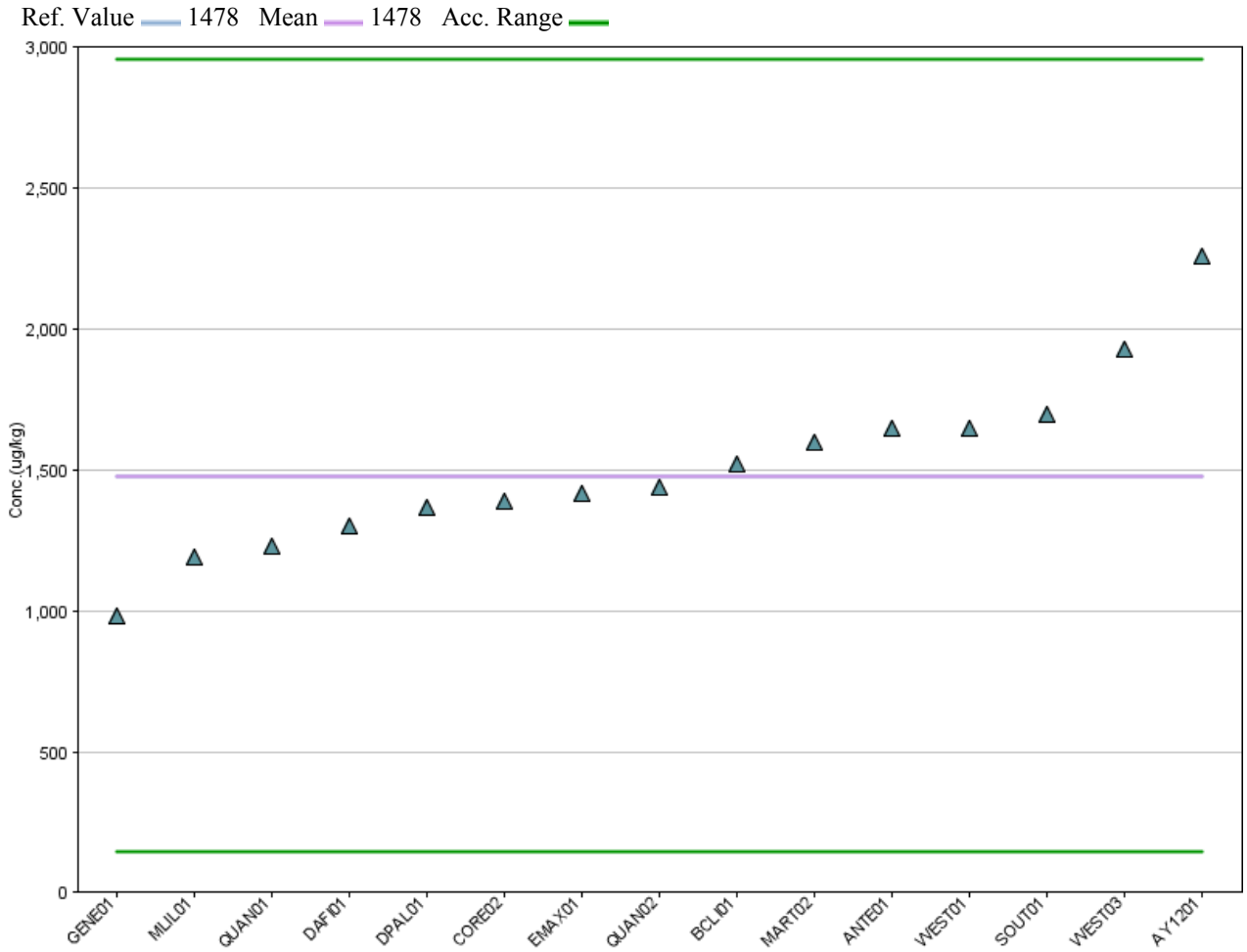
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,925.00 (±5 Standard Deviations)

bis(2-chloroethyl)ether

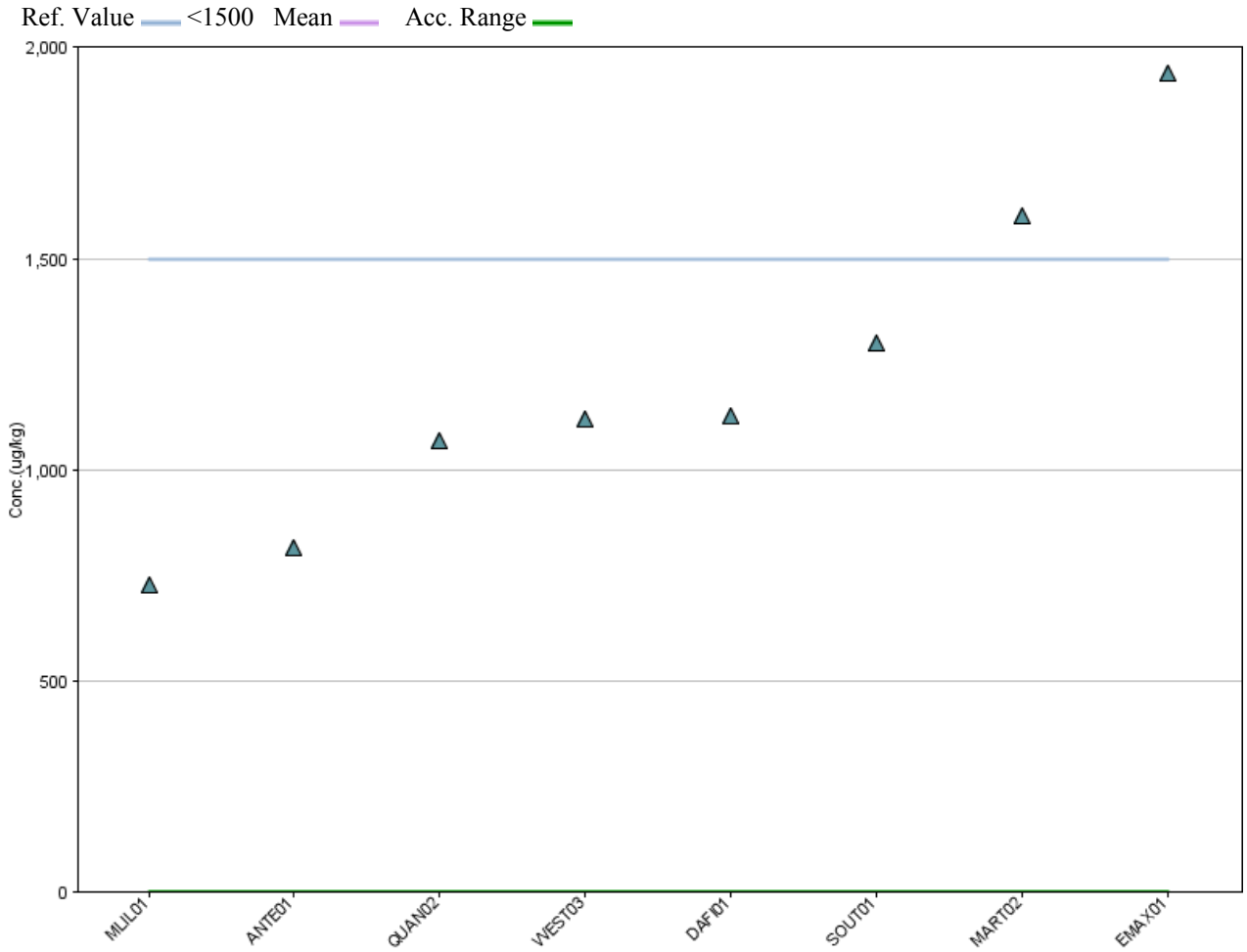
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 3,974.00 (±5 Standard Deviations)

Bis(2-ethylhexyl)phthalate

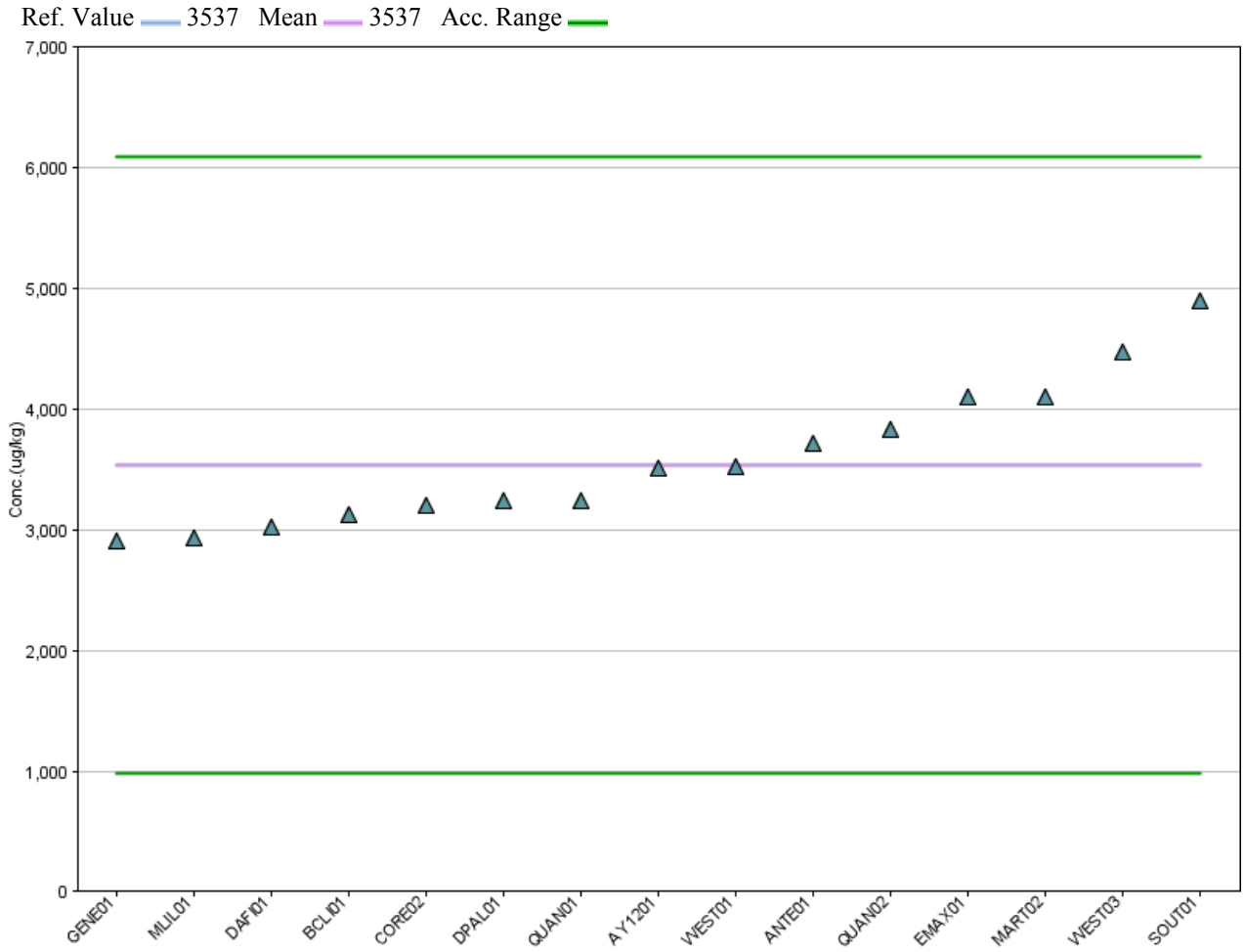
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 2,085.00 (±5 Standard Deviations)

Butylbenzylphthalate

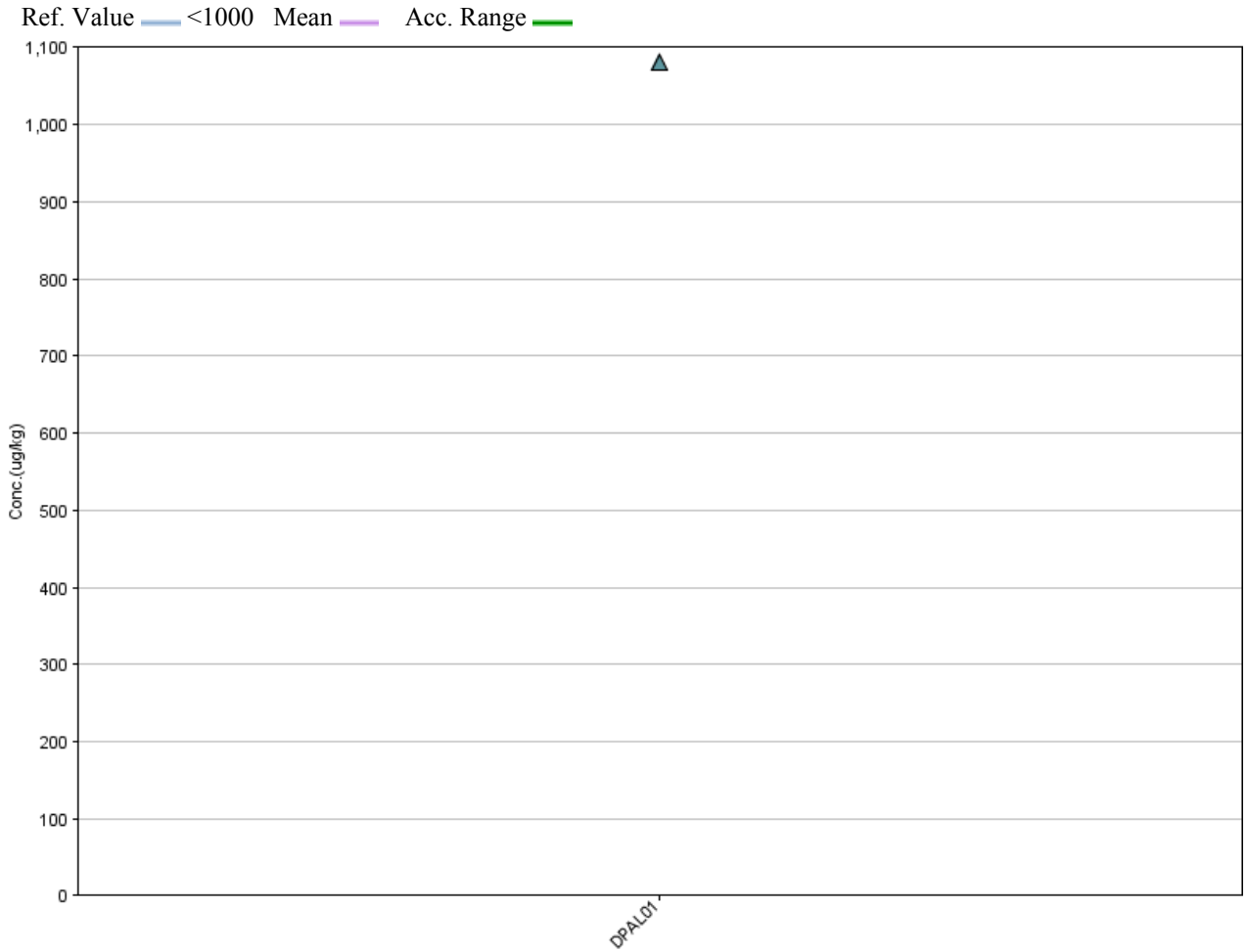
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 7,851.00 (±5 Standard Deviations)

Chrysene

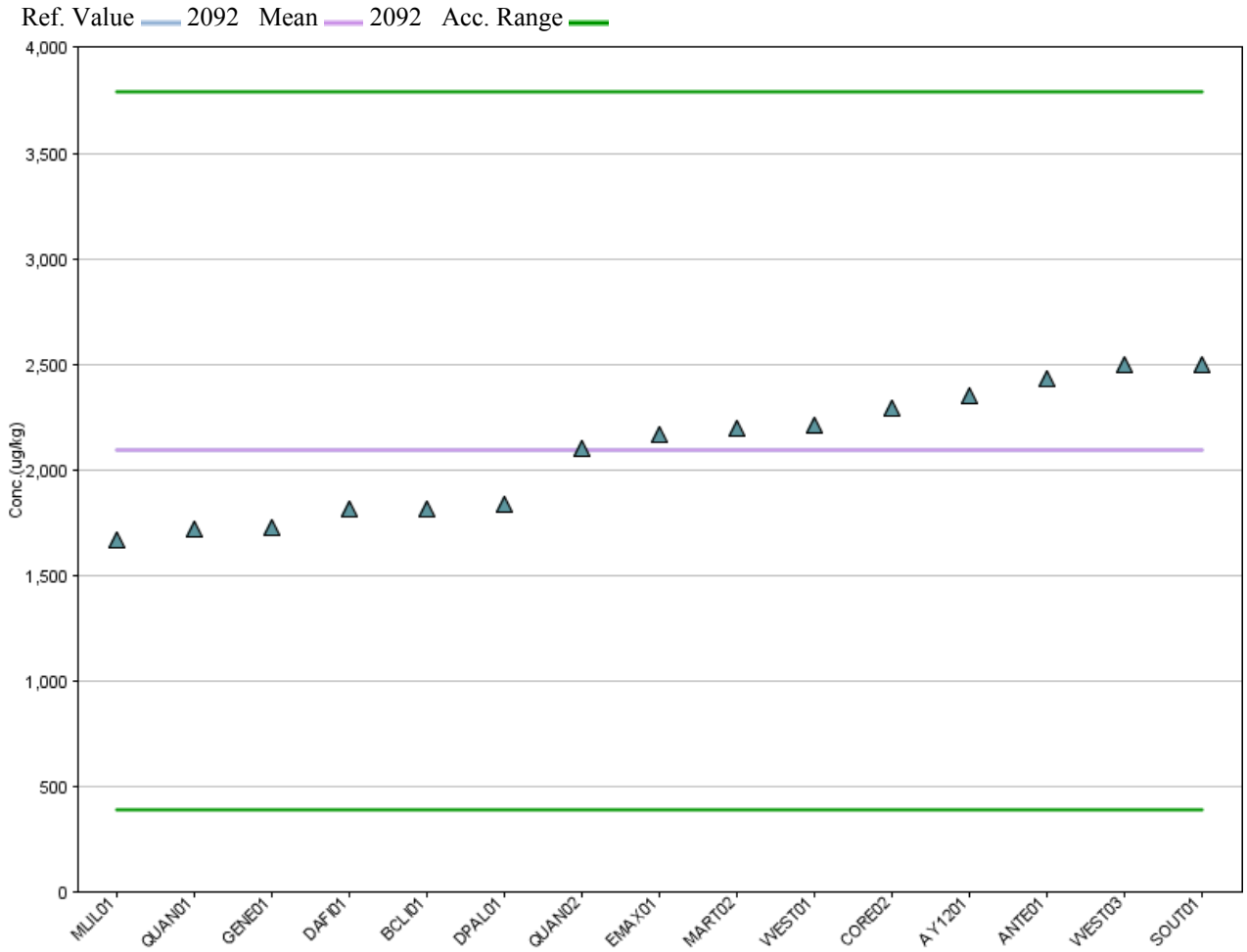
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 1,085.00 (±5 Standard Deviations)

Di-n-butylphthalate

MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,920.00 (±5 Standard Deviations)

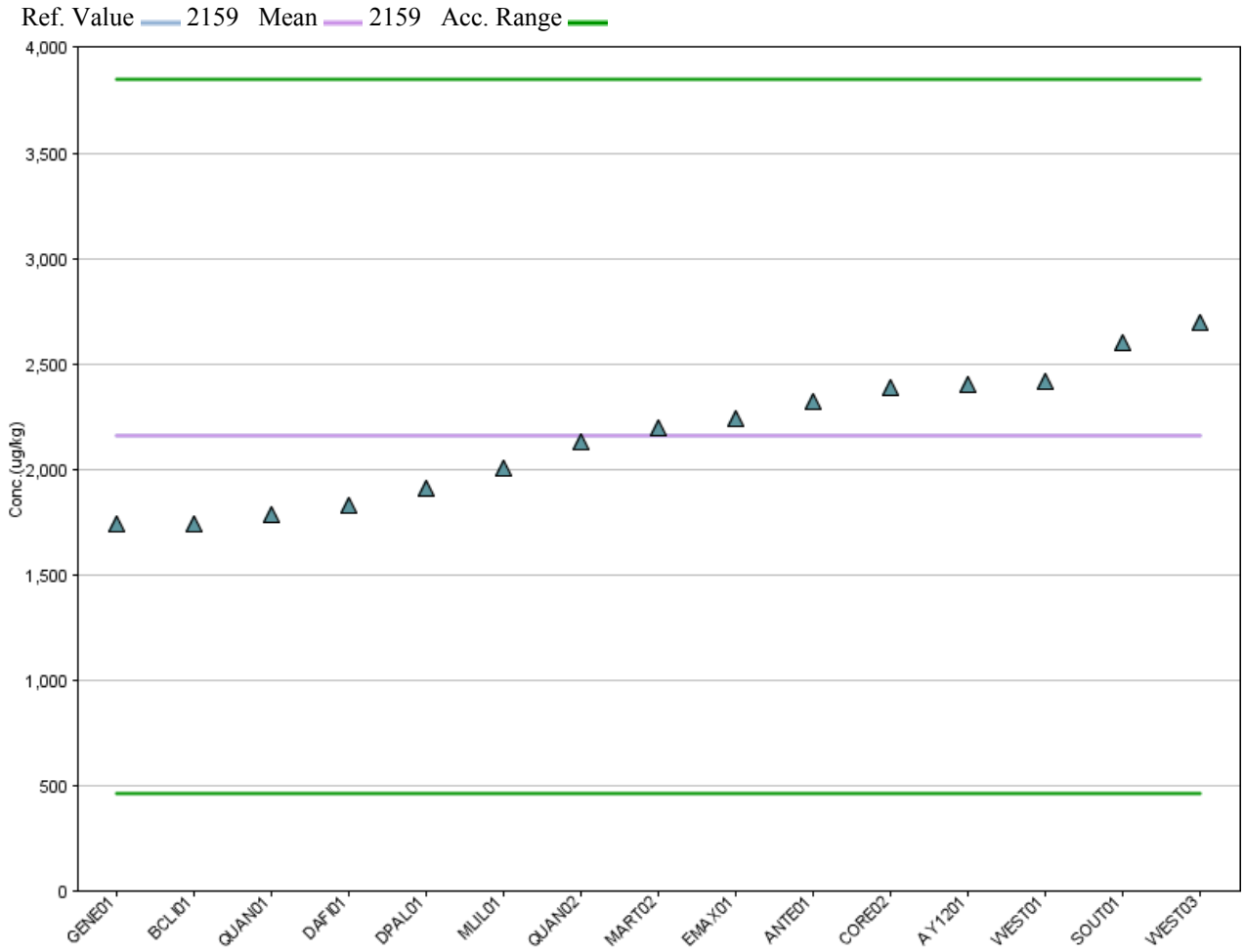
Dibenzofuran

MAPEP-12-OrS27

Note: This chart shows only data points with values between 0.00 and 1,610.00 (±5 Standard Deviations)

Diethylphthalate

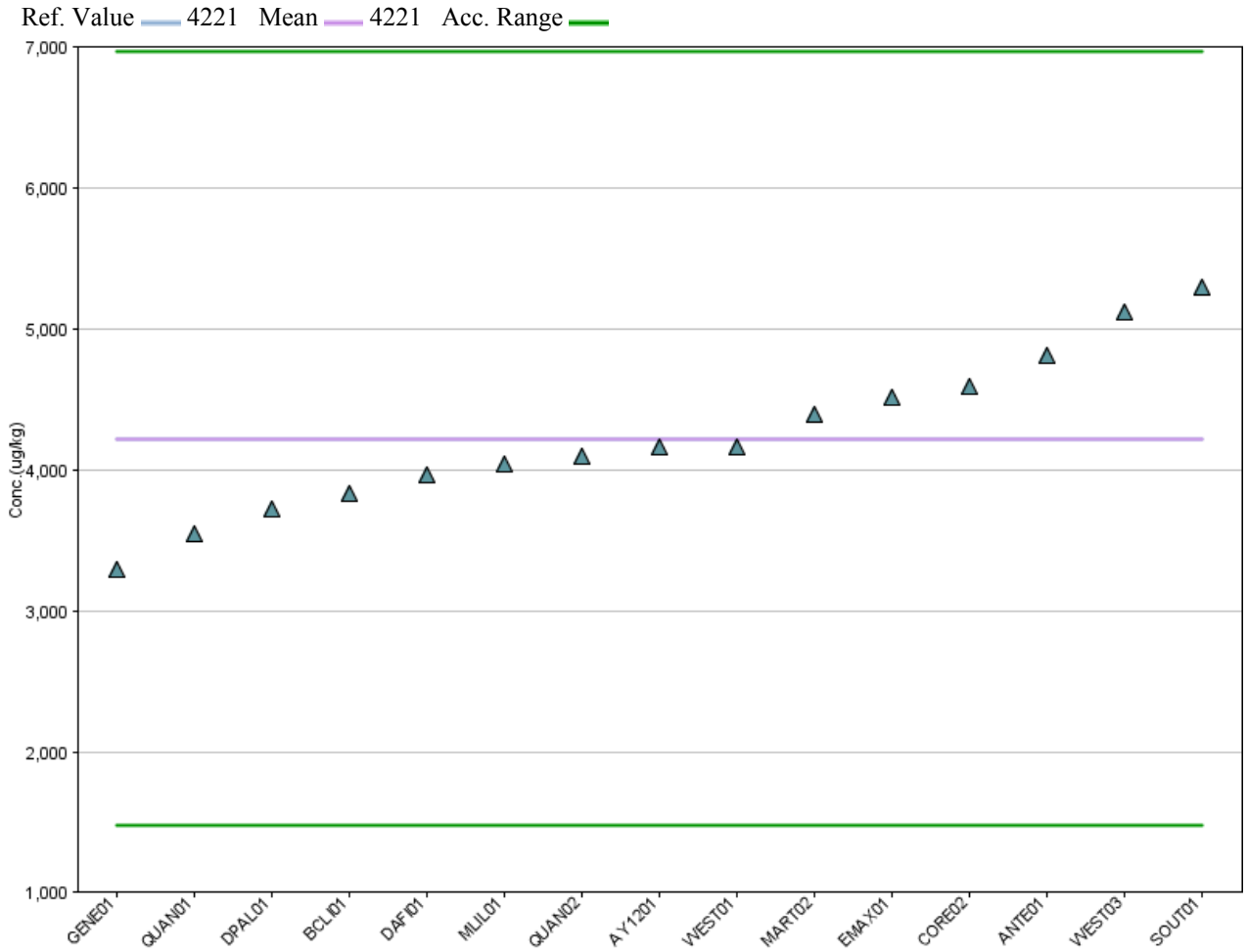
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 4,981.00 (±5 Standard Deviations)

Dimethylphthalate

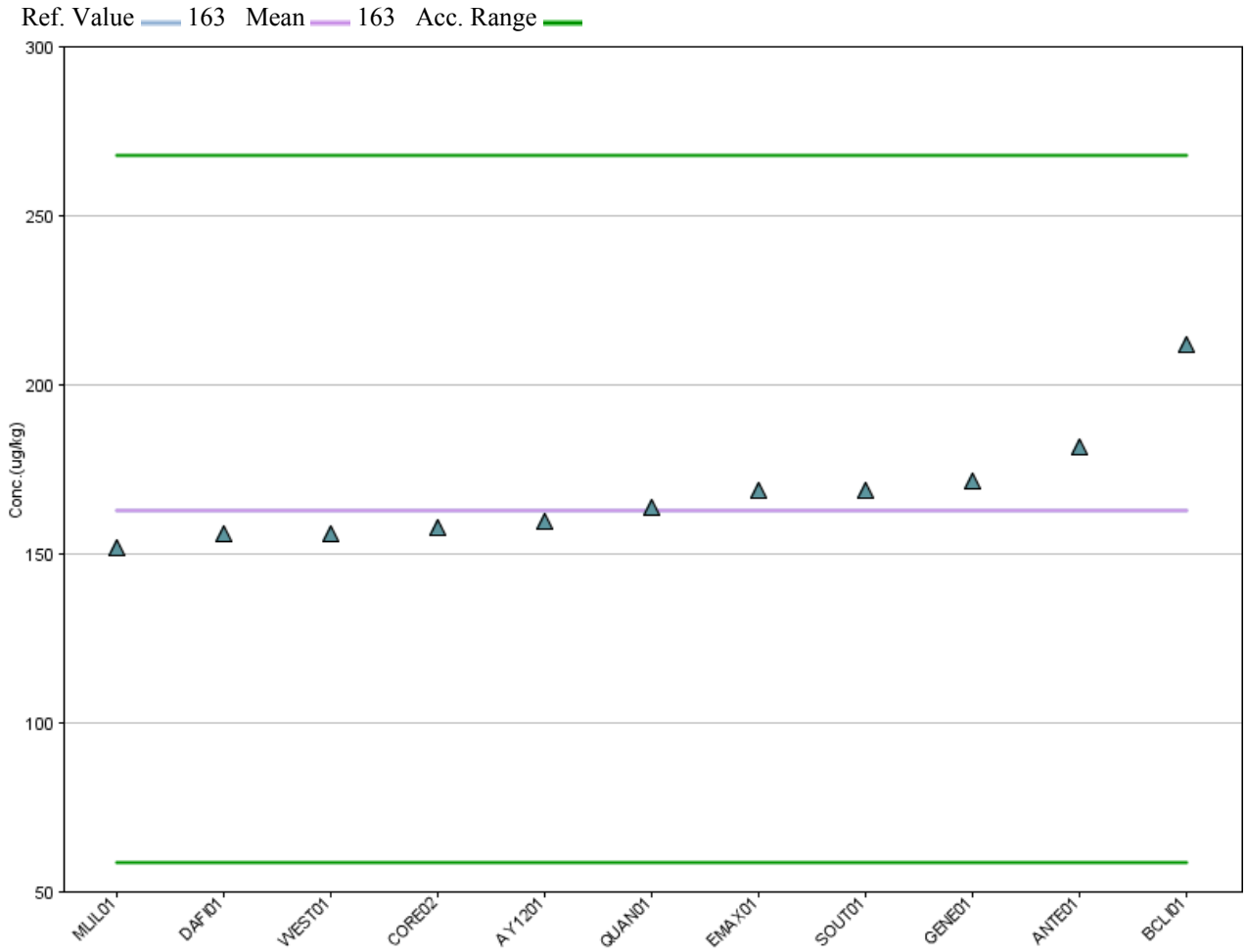
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 8,815.00 (±5 Standard Deviations)

Endosulfan I

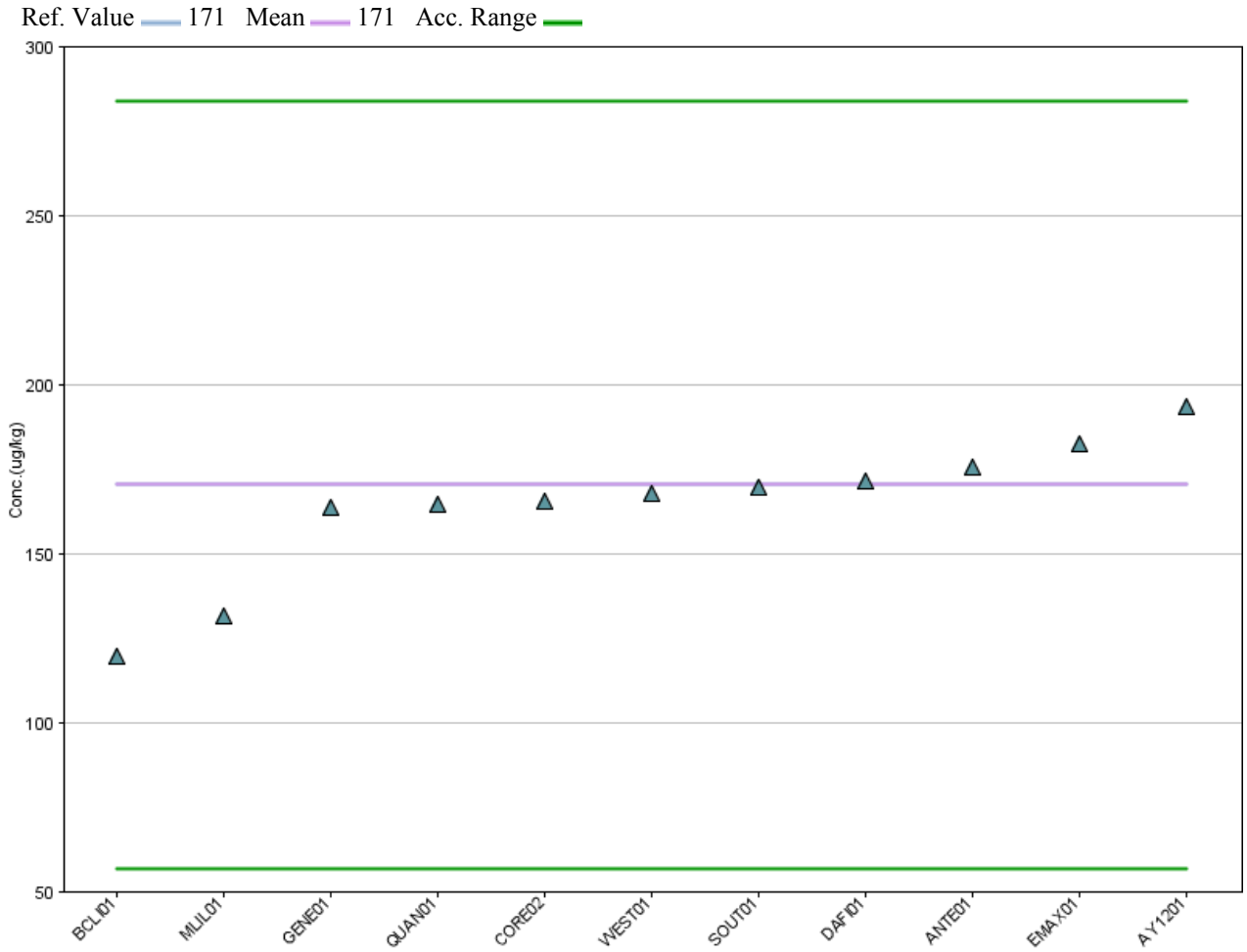
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 343.00 (±5 Standard Deviations)

Endosulfan II

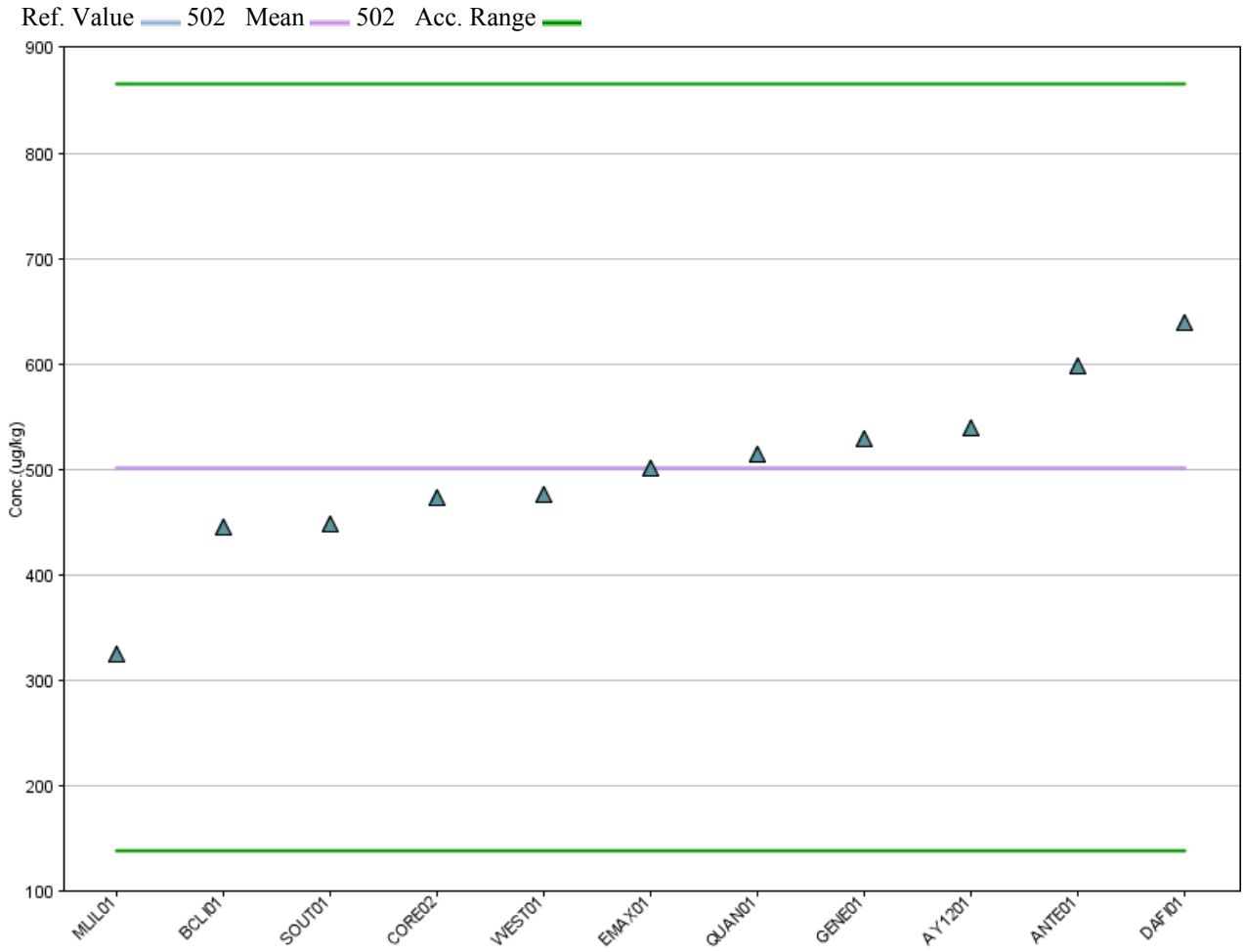
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 355.00 (±5 Standard Deviations)

Endosulfan sulfate

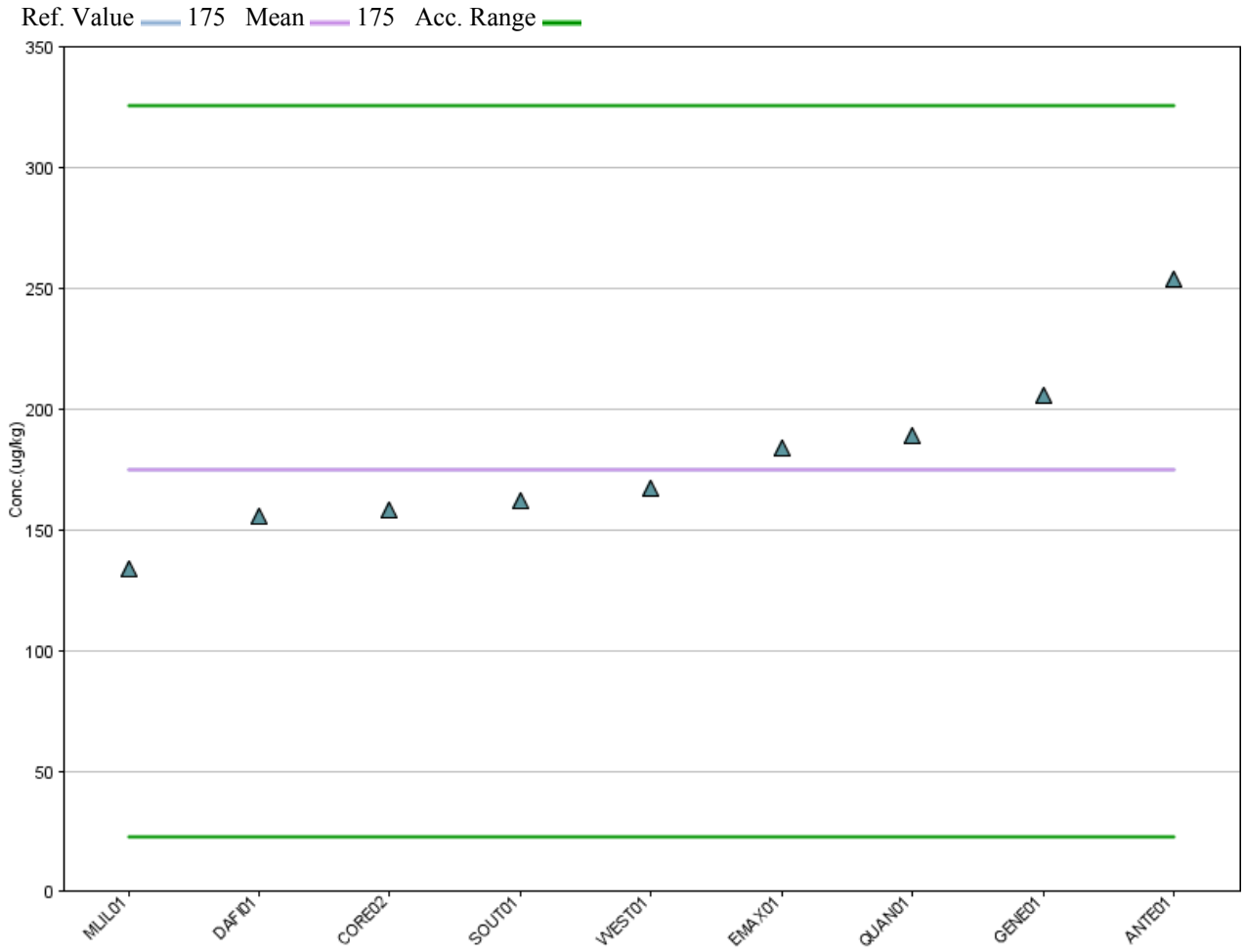
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 1,104.00 (±5 Standard Deviations)

Endrin Aldehyde

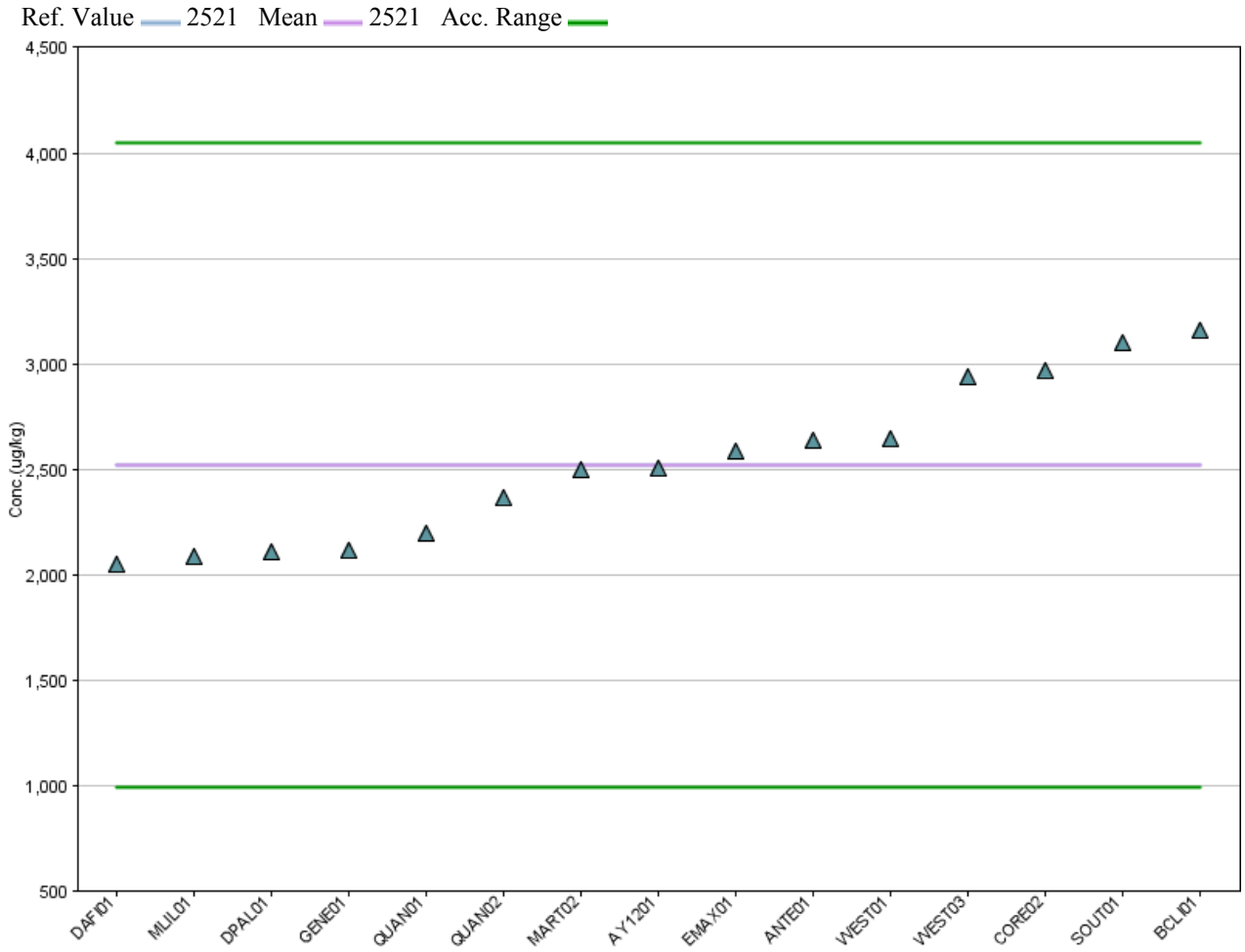
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 466.00 (±5 Standard Deviations)

Fluoranthene

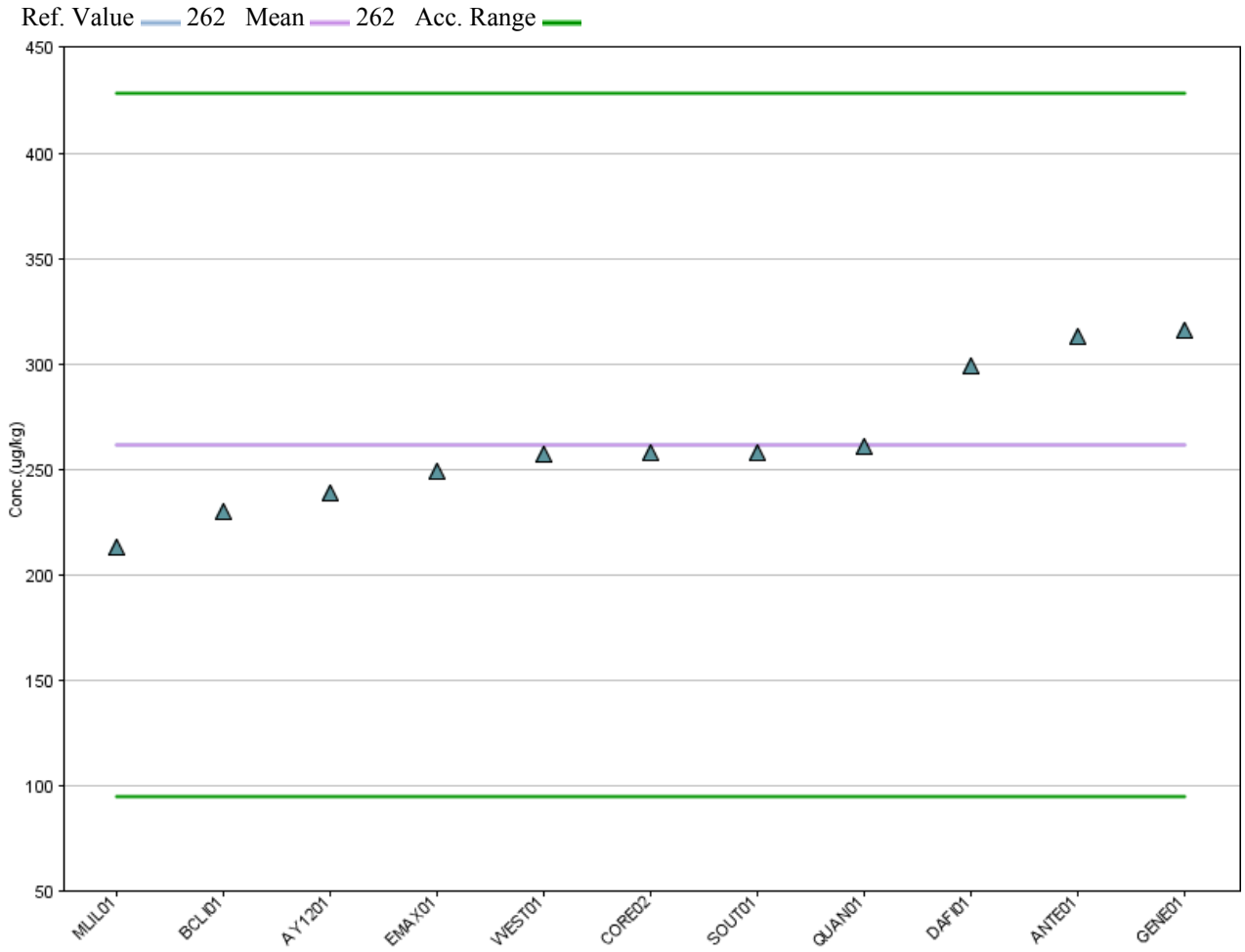
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 5,078.00 (±5 Standard Deviations)

Heptachlor

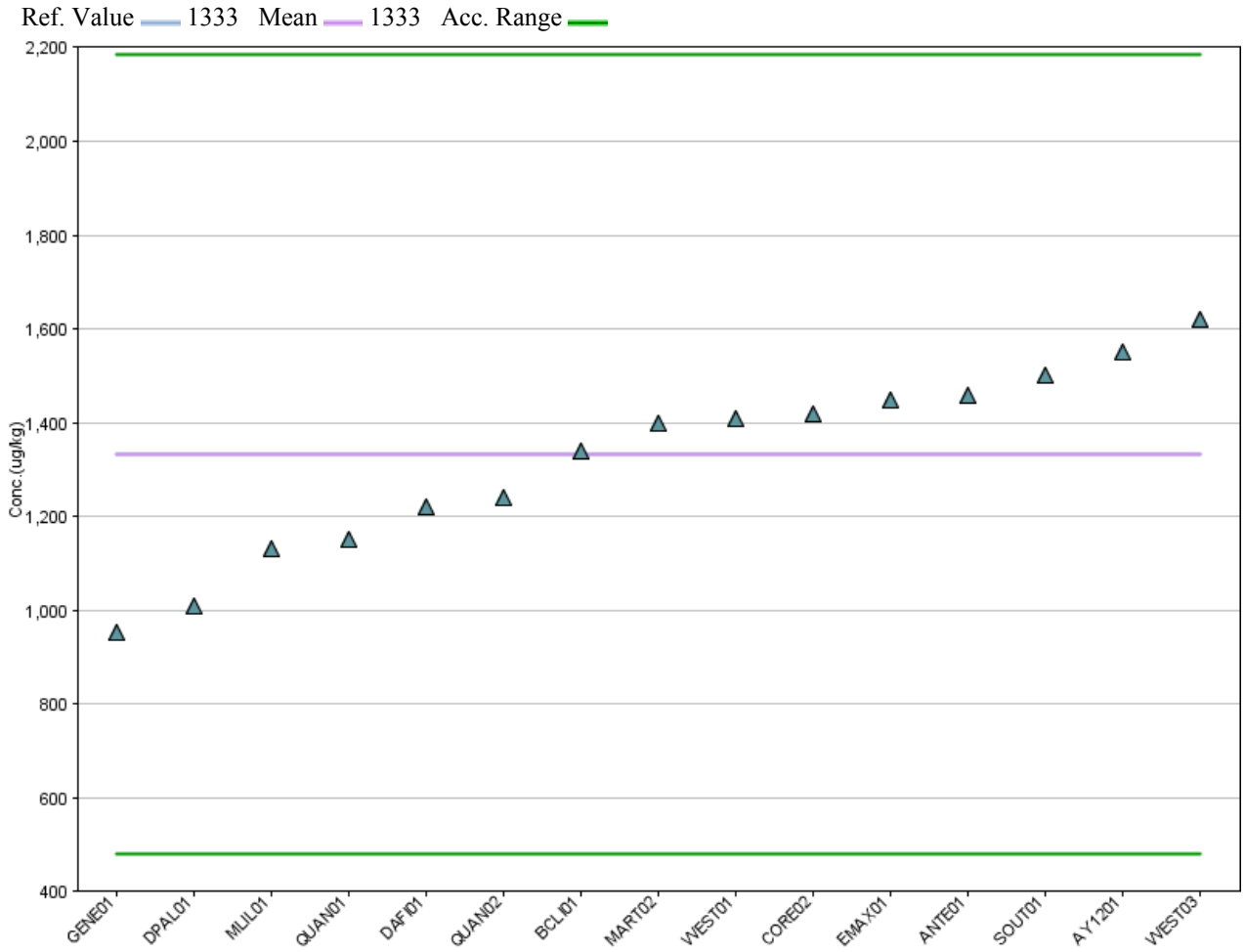
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 543.00 (±5 Standard Deviations)

Hexachlorobenzene

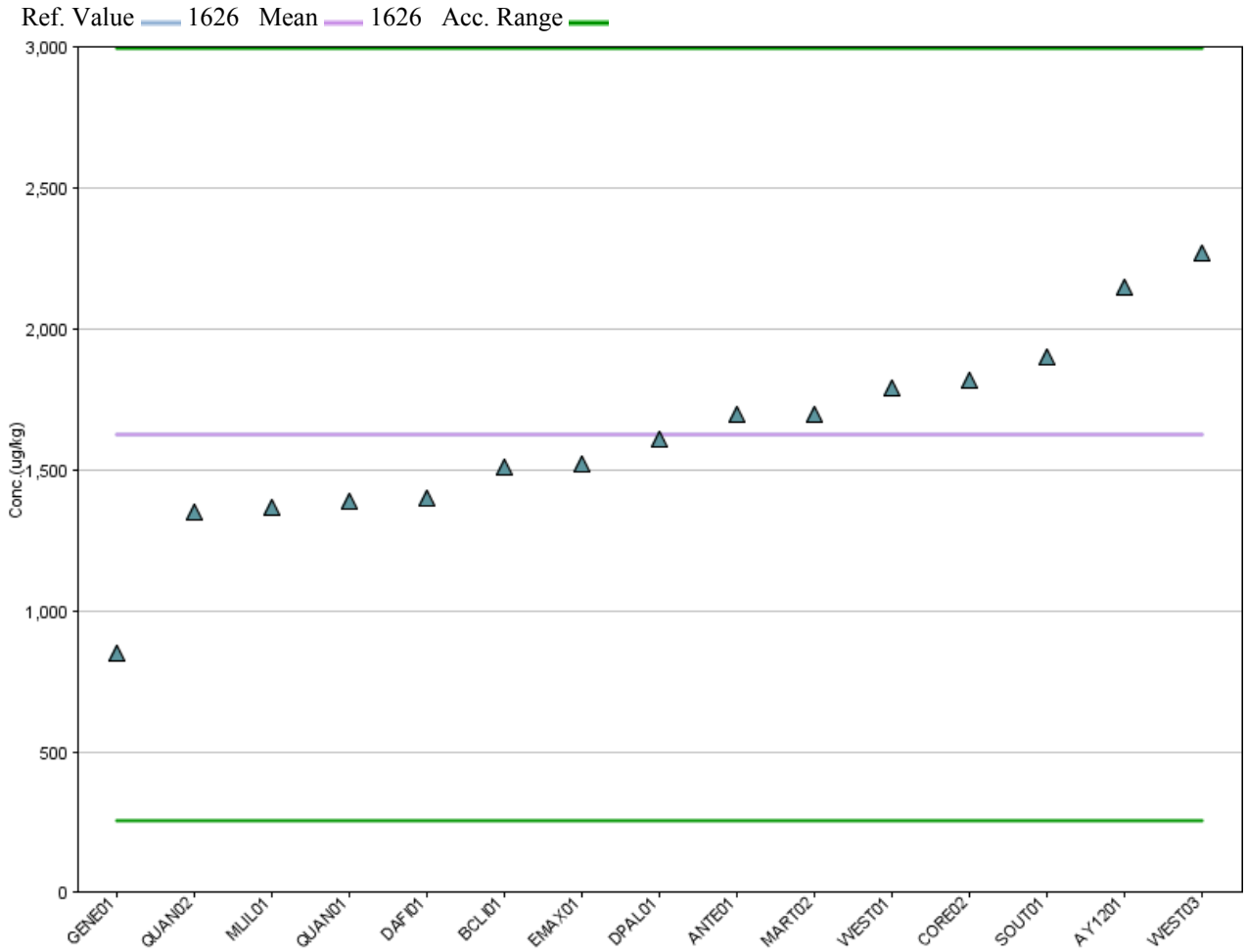
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 2,744.00 (±5 Standard Deviations)

Hexachlorobutadiene

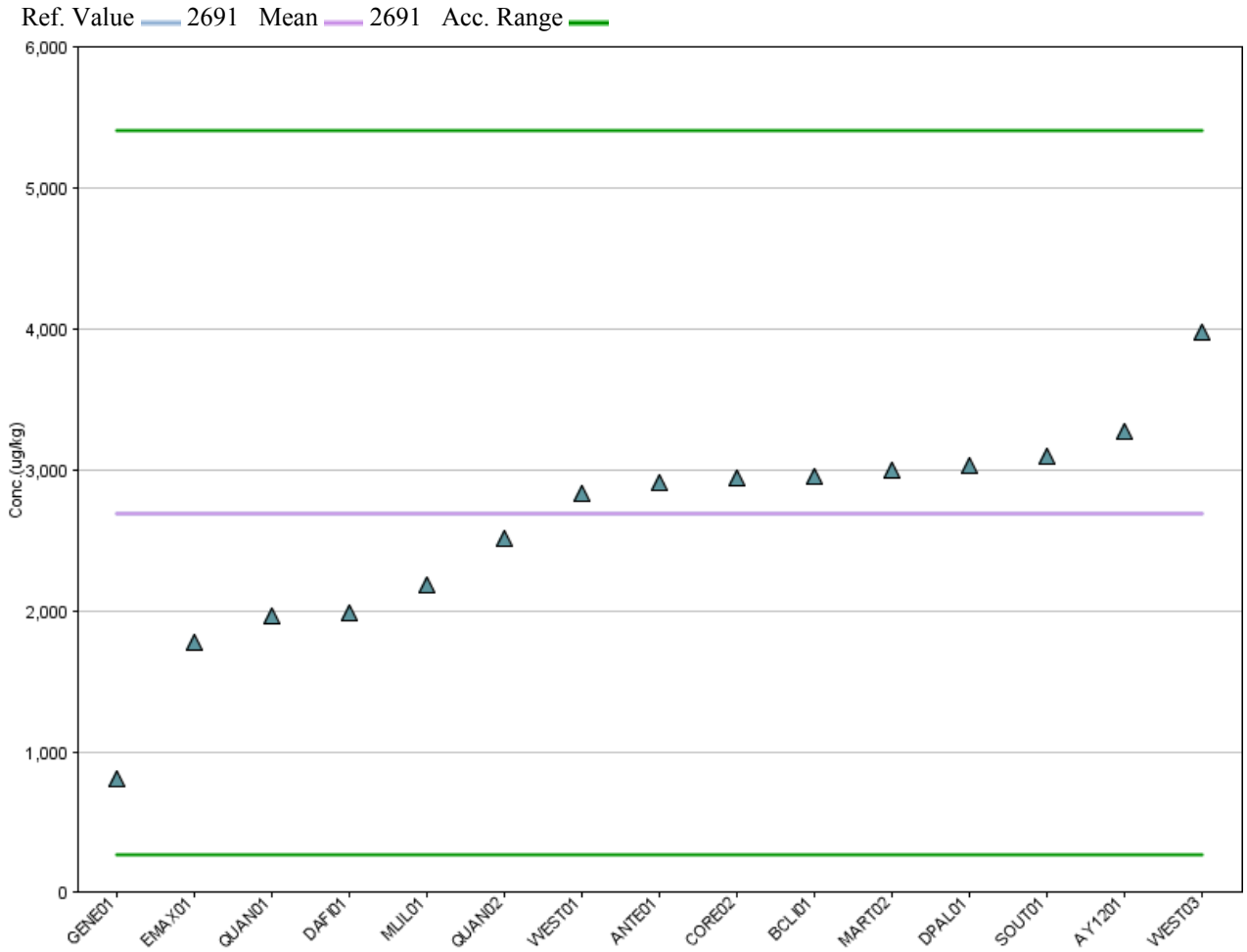
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 3,907.00 (±5 Standard Deviations)

Hexachloroethane

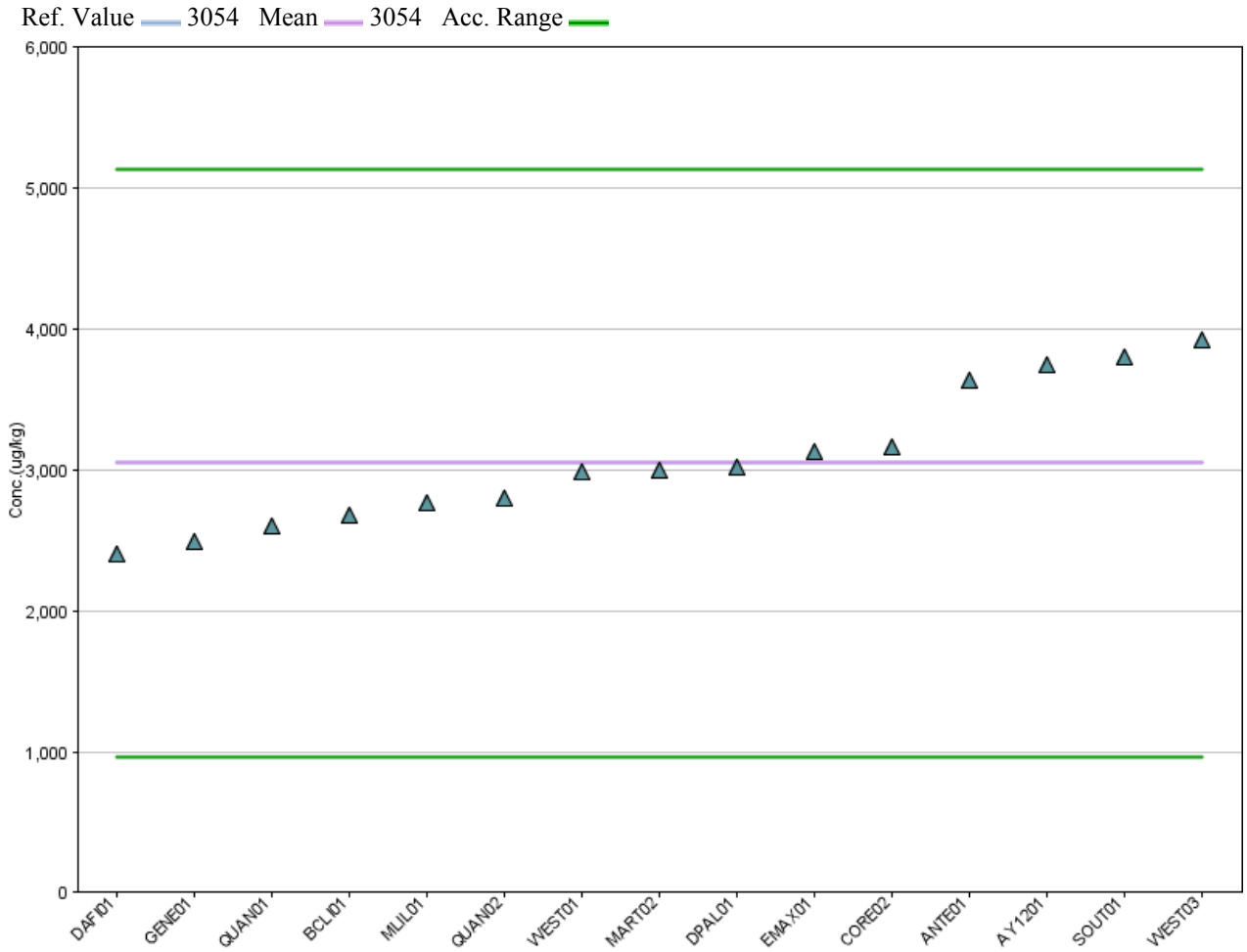
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 7,149.00 (±5 Standard Deviations)

Isophorone

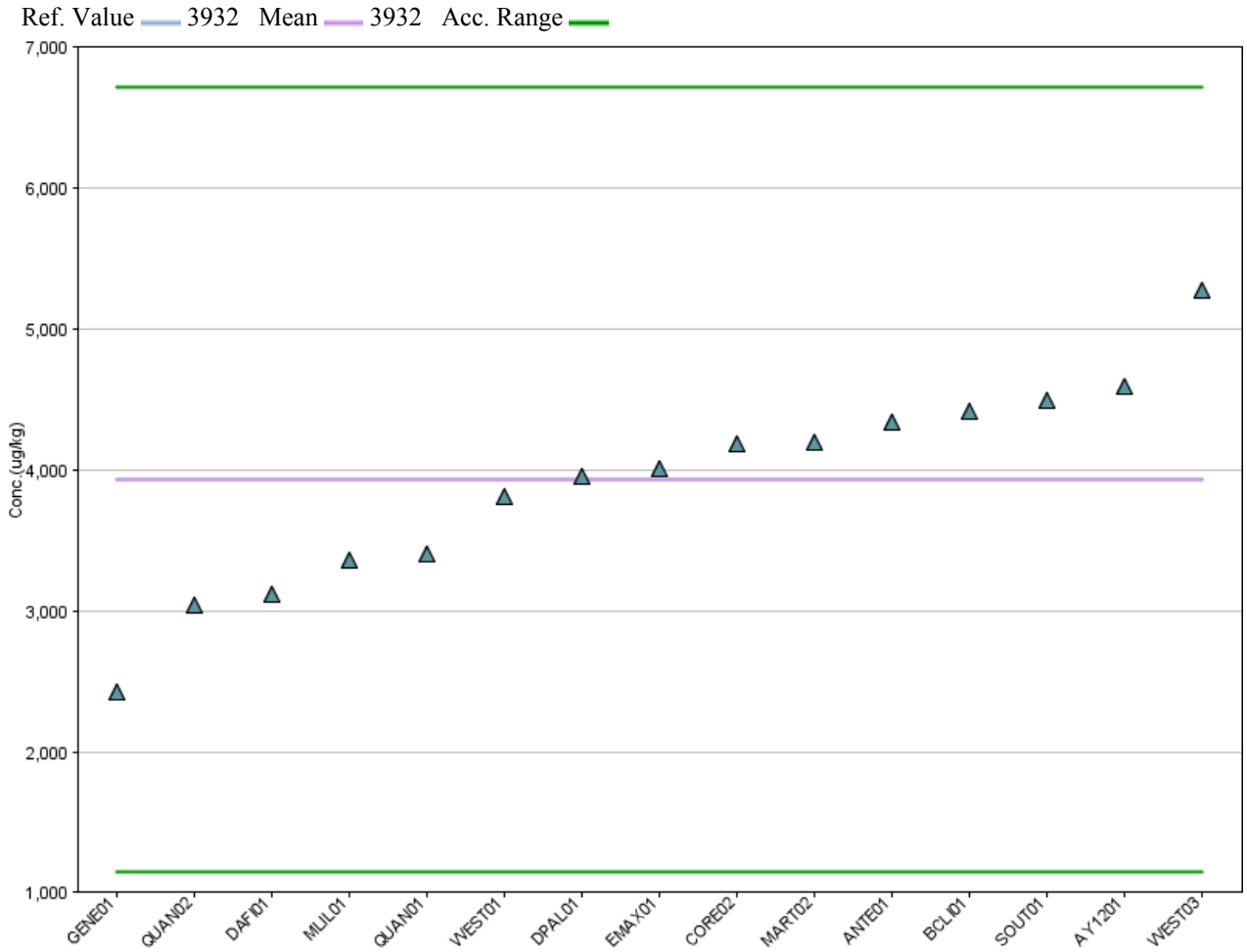
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 6,557.00 (±5 Standard Deviations)

Naphthalene

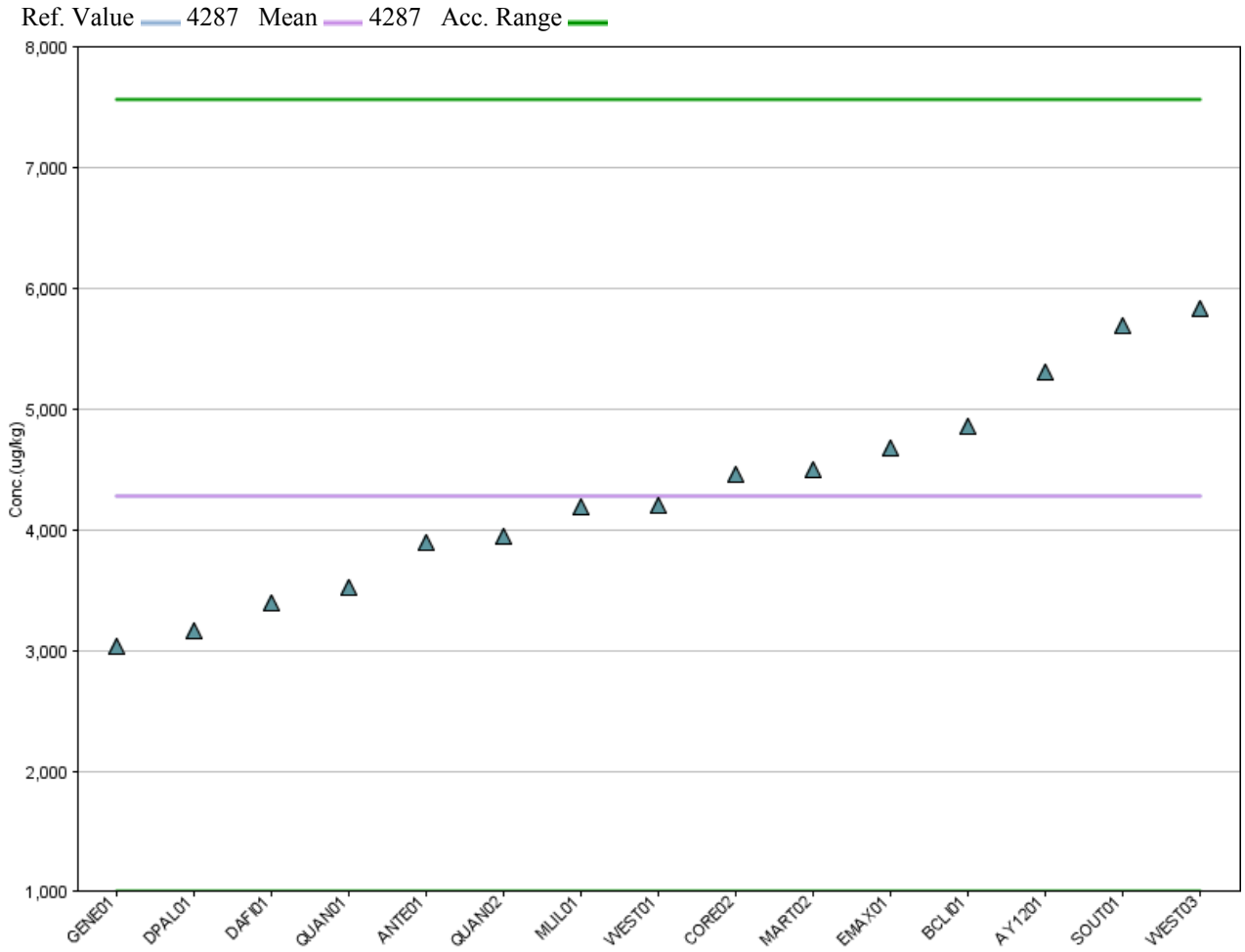
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 8,550.00 (±5 Standard Deviations)

Nitrobenzene

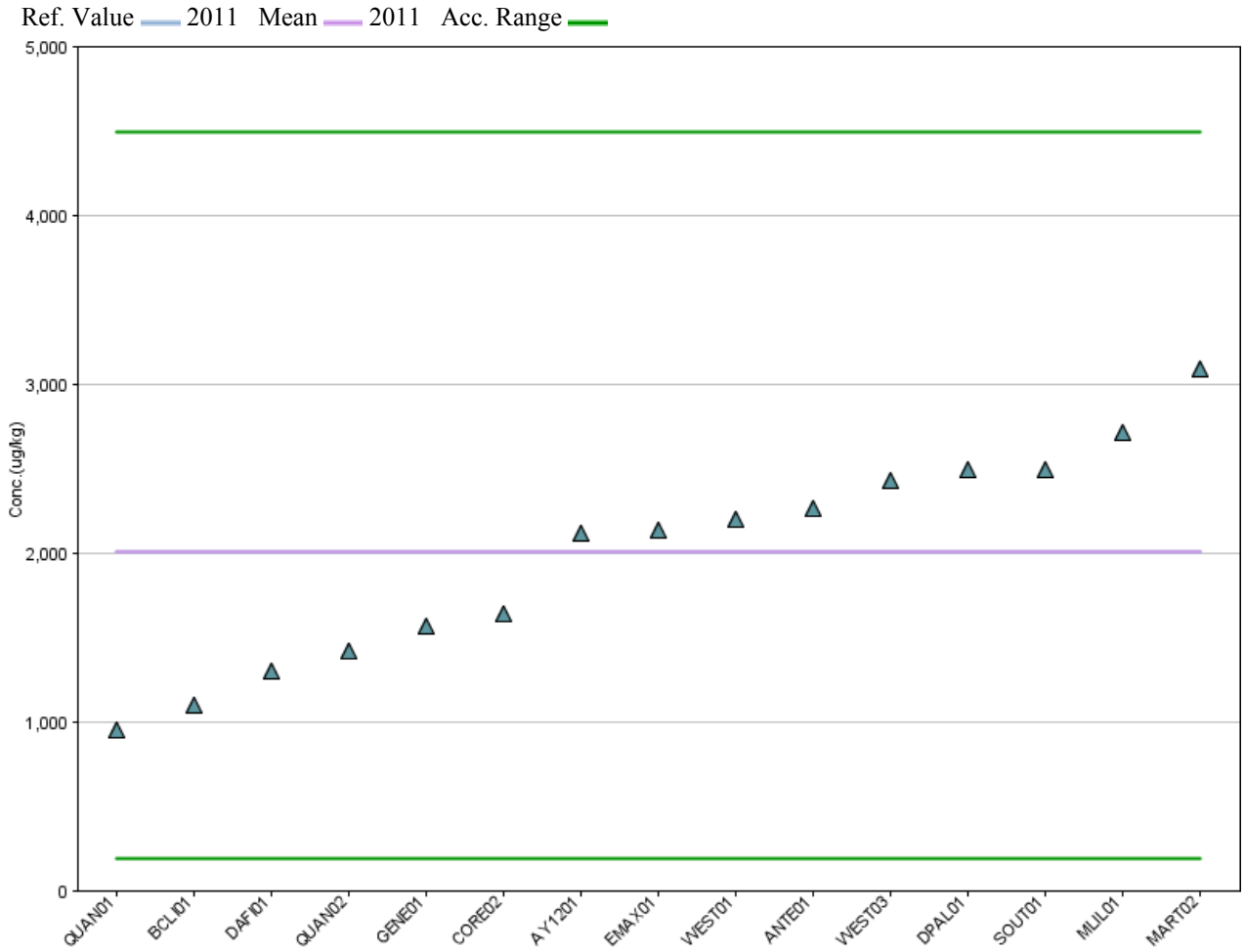
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 9,783.00 (±5 Standard Deviations)

Pentachlorophenol

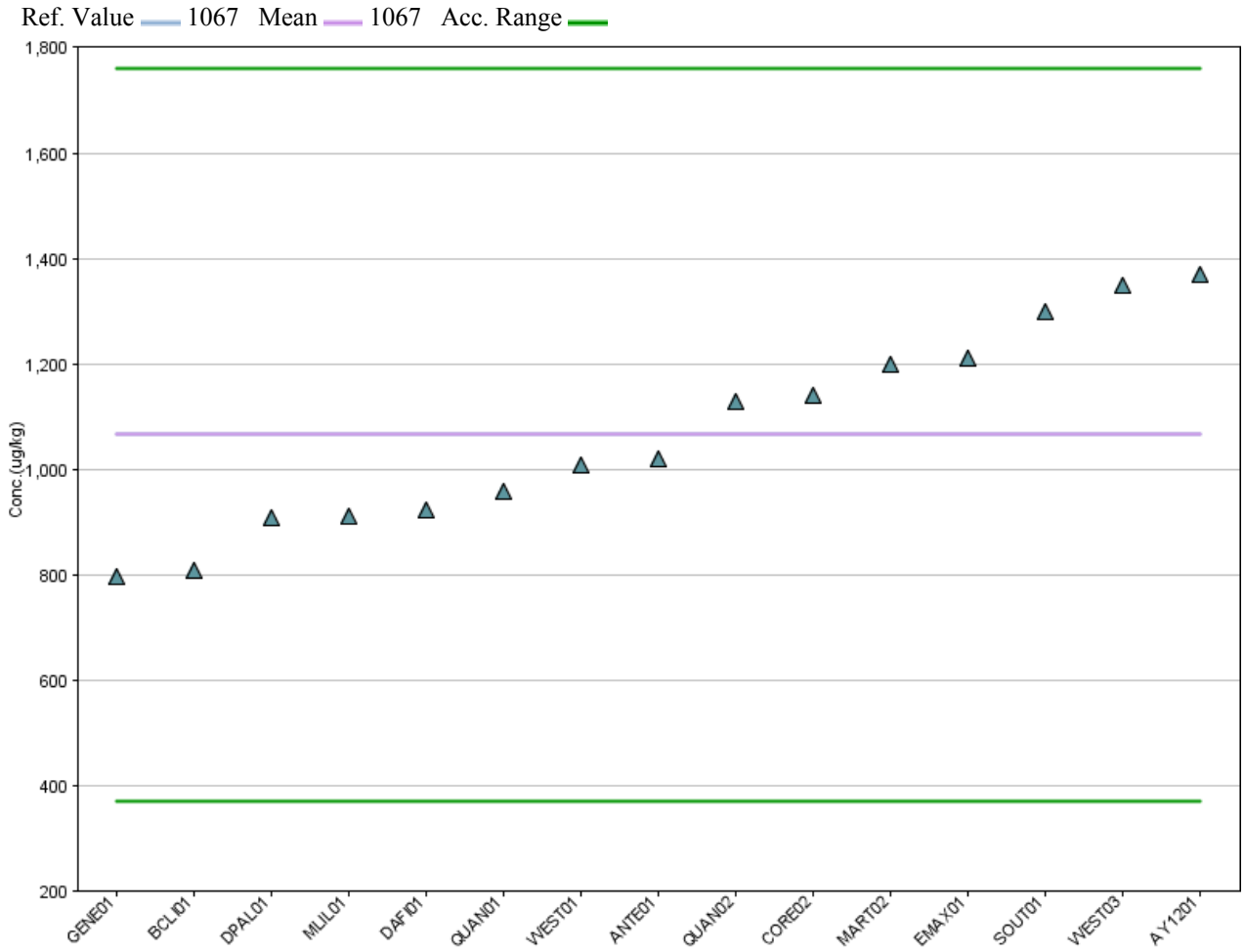
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 6,147.00 (±5 Standard Deviations)

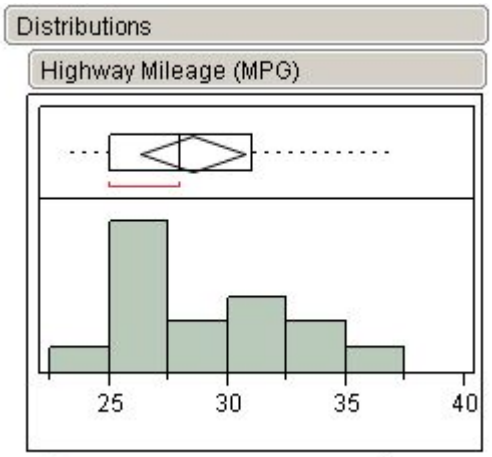
Pyrene

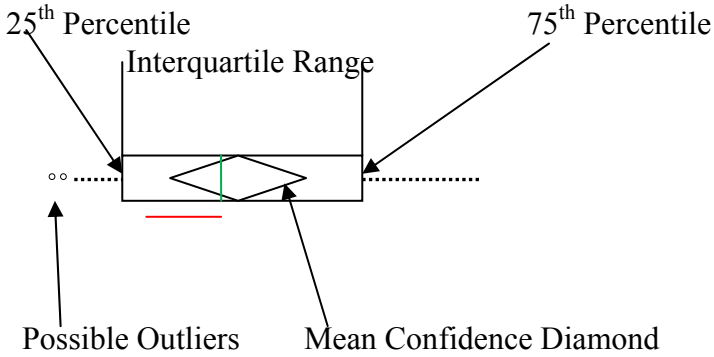
MAPEP-12-OrS27



Note: This chart shows only data points with values between 0.00 and 2,224.00 (±5 Standard Deviations)

The intent of the distribution graphs contained within this report is to graphically demonstrate to users how % Bias data within the current MAPEP Series appears when examined by matrix, by analyte, by method of sample preparation or by method of detection. The data points (small 'dots') plot the bias (or z-score for organic constituents) of each of the analytes in each of the matrices. The BLACK small vertical line inside the small rectangle at the top of the data distribution graph is the mean of the population of the bias shown for that analyte in the matrix.





Moments

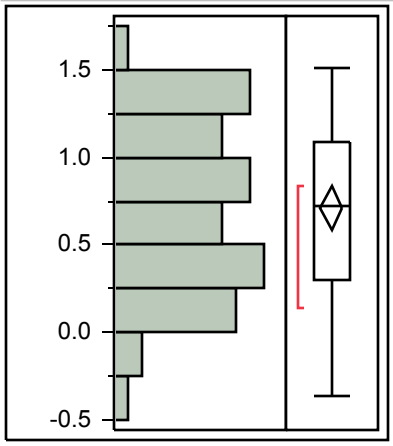
Mean	28.466667
Std Dev	3.9797104
Std Err Mean	1.0275568
Upper 95% Mean	30.670557
Lower 95% Mean	26.262776
N	15
Sum Wgt	15
Sum	427
Variance	15.838095
Skewness	0.7309964
Kurtosis	-0.165153
CV	13.980247
N Missing	0

The box plots summarize the distribution of points for each analyte. The ends of the box are the 25th and 75th quantiles. The difference between the quartiles is the interquartile range. The line across the middle of the box identifies the median bias value. Each box has lines, sometimes called whiskers, which extend from each end. The whiskers extend from the ends of the small box to the outermost data point that falls within the distances computed. Any potential outliers are represented as small black dots.

The box plot of the bias data points and the mean visually illustrate the breadth of the distribution and where any potential outliers in the distribution might lie. The moments for the distribution plot are provided below the Bias plot. In some cases, N becomes very small and thus developed statistics may not accurately reflect estimates of the population if N were a significantly larger value.

Distributions Detection Method=Other

ZScore



Quantiles

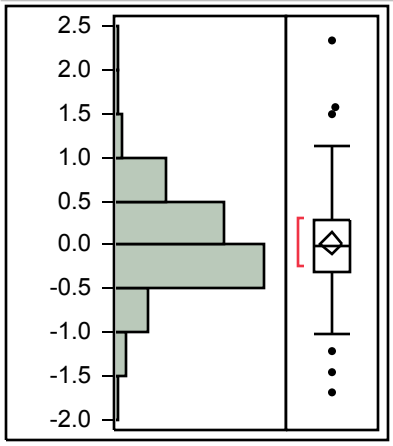
100.0%	maximum	1.51
99.5%		1.51
97.5%		1.4995
90.0%		1.404
75.0%	quartile	1.09
50.0%	median	0.725
25.0%	quartile	0.3025
10.0%		0.162
2.5%		-0.276
0.5%		-0.36
0.0%	minimum	-0.36

Summary Statistics

Mean	0.7086667
Std Dev	0.4766531
Std Err Mean	0.0615357
Upper 95% Mean	0.8317992
Lower 95% Mean	0.5855341
N	60

Distributions Detection Method=SW-846 8081A Organochlorine Pesticides by Gas Chromatography

ZScore



Quantiles

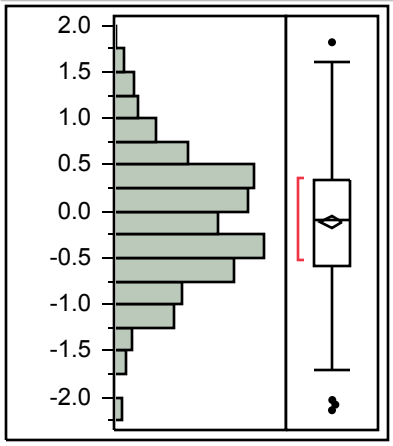
100.0%	maximum	2.33
99.5%		2.33
97.5%		1.55
90.0%		0.74
75.0%	quartile	0.295
50.0%	median	-0.01
25.0%	quartile	-0.3
10.0%		-0.74
2.5%		-1.39
0.5%		-1.68
0.0%	minimum	-1.68

Summary Statistics

Mean	0.0196629
Std Dev	0.6172105
Std Err Mean	0.0654242
Upper 95% Mean	0.1496797
Lower 95% Mean	-0.110354
N	89

Distributions Detection Method=SW-846 8270C Semivolatile Organic Compounds by GC/MS

ZScore



Quantiles

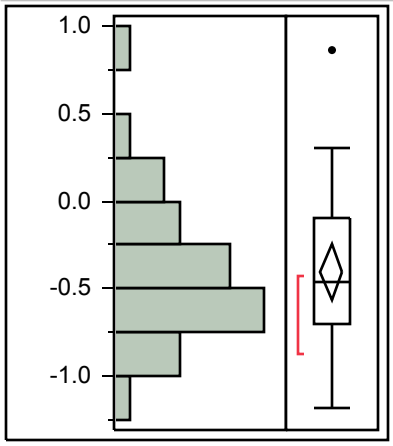
100.0%	maximum	1.82
99.5%		1.6033
97.5%		1.30075
90.0%		0.753
75.0%	quartile	0.3375
50.0%	median	-0.09
25.0%	quartile	-0.58
10.0%		-1.003
2.5%		-1.34
0.5%		-2.0809
0.0%	minimum	-2.14

Summary Statistics

Mean	-0.109848
Std Dev	0.6824616
Std Err Mean	0.034295
Upper 95% Mean	-0.042425
Lower 95% Mean	-0.177272
N	396

Distributions Preparation Method=Other

ZScore



Quantiles

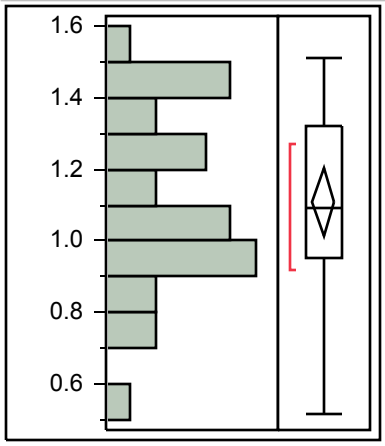
100.0%	maximum	0.86
99.5%		0.86
97.5%		0.86
90.0%		0.194
75.0%	quartile	-0.0975
50.0%	median	-0.465
25.0%	quartile	-0.705
10.0%		-0.868
2.5%		-1.18
0.5%		-1.18
0.0%	minimum	-1.18

Summary Statistics

Mean	-0.405
Std Dev	0.4244002
Std Err Mean	0.0774845
Upper 95% Mean	-0.246526
Lower 95% Mean	-0.563474
N	30

Distributions Preparation Method=Pressurized Fluid Extraction (Method 3545A)

ZScore



Quantiles

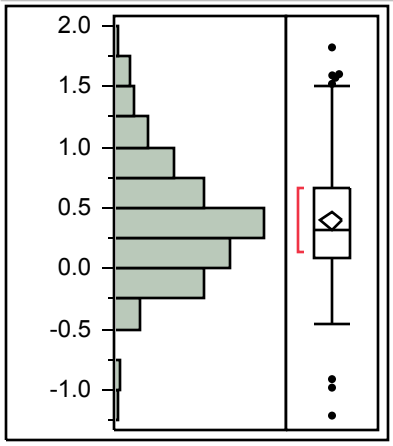
100.0%	maximum	1.51
99.5%		1.51
97.5%		1.51
90.0%		1.447
75.0%	quartile	1.32
50.0%	median	1.09
25.0%	quartile	0.95
10.0%		0.739
2.5%		0.52
0.5%		0.52
0.0%	minimum	0.52

Summary Statistics

Mean	1.106
Std Dev	0.2534942
Std Err Mean	0.0462815
Upper 95% Mean	1.2006563
Lower 95% Mean	1.0113437
N	30

Distributions Preparation Method=Soxhlet Extraction (Method 3540C)

ZScore



Quantiles

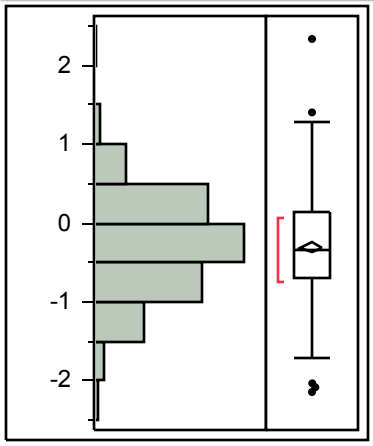
100.0%	maximum	1.82
99.5%		1.82
97.5%		1.5375
90.0%		1.078
75.0%	quartile	0.655
50.0%	median	0.32
25.0%	quartile	0.08
10.0%		-0.15
2.5%		-0.447
0.5%		-1.21
0.0%	minimum	-1.21

Summary Statistics

Mean	0.3917297
Std Dev	0.4961999
Std Err Mean	0.0364813
Upper 95% Mean	0.4637053
Lower 95% Mean	0.3197542
N	185

Distributions Preparation Method=Ultrasonic Extraction (Method 3550B)

ZScore



Quantiles

100.0%	maximum	2.33
99.5%		1.86035
97.5%		0.899
90.0%		0.398
75.0%	quartile	0.1375
50.0%	median	-0.33
25.0%	quartile	-0.7
10.0%		-1.08
2.5%		-1.6095
0.5%		-2.1097
0.0%	minimum	-2.14

Summary Statistics

Mean	-0.3091
Std Dev	0.6195981
Std Err Mean	0.0357725
Upper 95% Mean	-0.238702
Lower 95% Mean	-0.379498
N	300