MAPEP Mixed Analyte Performance Evaluation Program

Sample Statistical Summary

MAPEP-07-MaS18

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Inorganic							Units: (mg/kg)
Aluminum	6						
Antimony	23	14	22.6	3.4	23.5	0.2	16.5 - 30.6
Arsenic	25	23	21.8	2.9	20.2	0.4	14.1 - 26.3
Barium	24	24	236	25	244	15	171 - 317
Beryllium	24	22	13.2	1.2	13.8	0.1	9.7 - 17.9
Cadmium	26	26	8.97	0.67	9.49	0.09	6.64 - 12.34
Calcium	6						
Chromium	25	25	63.9	7.9	70.7	0.8	49.5 - 91.9
Cobalt	25	24	38.7	3.2	41.5	0.3	29.1 - 54.0
Copper	25	23	85.4	7.3	87.0	0.7	60.9 - 113.1
Iron	6						
Lead	26	26	77	6	79	1	55 - 103
Magnesium	6						
Manganese	6						
Mercury	21	19			<0.04		False Positive Test
Molybdenum	5	1					
Nickel	26	26	129	11	145	5	102 - 189
Potassium	6						
Selenium	23	14	4.23	0.60	4.44	0.05	3.11 - 5.77
Silver	23	22	88.4	7.2	92.4	0.9	64.7 - 120.1
Sodium	6						
Thallium	23	18			<1.0		False Positive Test
Vanadium	25	23	146	18	161	1	113 - 209
Zinc	24	24	284	31	319	4	223 - 415
Uranium-235	10	8	0.074	0.010	0.075	0.009	0.053 - 0.098
Uranium-238	10	9	11.2	1.6	11.9	0.2	8.3 - 15.5
Uranium-Total	13	12	11.0	1.4	12.0	0.2	8.4 - 15.6

Analyte	T(1)	A(2)	Calc(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Organic							Units: (ug/kg)
Aldrin	13	13					
delta-BHC	16	16	110.6	28.3	110.6		25.6 - 195.7
alpha-BHC	13	13					
beta-BHC	16	16	18.33	8.54	18.33		1.83 - 43.94
gamma-BHC (Lindane)	16	16	18.00	9.52	18.00		1.80 - 46.56
4,4'-DDD	13	13					
4,4'-DDE	13	13					
4,4'-DDT	16	16	101.7	25.5	101.7		25.3 - 178.1
Dieldrin	16	15	35.86	12.23	35.86		3.59 - 72.57
Endosulfan I	13	13					
Endosulfan II	13	13					
Endosulfan sulfate	13	12					
Endrin Aldehyde	13	13					
Endrin Ketone	11	11					
Endrin	13	13					
Heptachlor	16	15	7.51	2.77	7.51		0.75 - 15.83
Heptachlor epoxide	13	13					
Methoxychlor	11	11					
1,2-Dichlorobenzene	17	17					
1,3-Dichlorobenzene	17	17					

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
1,4-Dichlorobenzene	17	17					
Hexachlorobutadiene	17	17					
Hexachloroethane	16	16					
Naphthalene	20	20	3524	838	3524		1010 - 6038
Nitrobenzene	17	17					
1,2,4-Trichlorobenzene	17	17					
Acenaphthene	20	20	2319	532	2319		724 - 3914
Acenaphthylene	17	17					
Anthracene	20	20	2270	535	2270		664 - 3877
Benzo(a)anthracene	20	20	707	177	707		177 - 1237
Benzo(a)pyrene	17	17					
Benzo(b)fluoranthene	17	15					
Benzo(g,h,i)perylene	17	17					
Benzo(k)fluoranthene	20	18	3330	727	3330		1150 - 5511
4-Bromophenyl-phenylether	13	13					
Butylbenzylphthalate	17	17					
4-Chloro-3-methylphenol	17	17					
bis(2-chloroethoxy)methane	13	13					
bis(2-chloroethyl)ether	12	12					
bis(2-chloroisopropyl)ether	13	13					
2-Chloronaphthalene	20	20	2795	660	2795		815 - 4774
2-Chlorophenol	20	20	5313	1324	5313		1340 - 9285
4-Chlorophenyl-phenylether	13	13					
Chrysene	17	17					
Dibenzo(a,h)anthracene	17	17					
Dibenzofuran	19	19	3339	716	3339		1191 - 5487
Di-n-butylphthalate	20	20	7421	1703	7421		2311 - 12532
2,4-Dichlorophenol	20	20	1344	431	1344		134 - 2637
2,6-Dichlorophenol	6	6					
Diethylphthalate	20	20	4081	1001	4081		1077 - 7084
2,4-Dimethylphenol	16	16					
Dimethylphthalate	20	20	5738	1204	5738		2126 - 9350
1,3-Dinitrobenzene	5	5					
2,4-Dinitrophenol	16	16					
2,4-Dinitrotoluene	20	20	1720	533	1720		172 - 3318
2,6-Dinitrotoluene	20	20	2789	607	2789		969 - 4609
Di-n-octylphthalate	20	20	942	260	942		163 - 1721
Bis(2-ethylhexyl)phthalate	20	14	1772	474	1772		349 - 3195
Fluoranthene	17	17					
Fluorene	20	20	6722	1281	6722		2878 - 10566
Hexachlorobenzene	20	20	846	188	846		282 - 1411
Hexachlorocyclopentadiene	16	16					
Indeno(1,2,3-c,d)pyrene	17	17					
Isophorone	16	16					
4,6-Dinitro-2-methylphenol	16	16					
2-Methylnaphthalene	15	15					
2-Methylphenol	20	20	1402	498	1402		140 - 2895
4-Nitrophenol	17	17					
3-Methyl & 4-Methylphenol	15	15					
2-Nitrophenol	17	17					
Pentachlorophenol	17	17					
Phenanthrene	20	20	5112	1000	5112		2111 - 8113
Phenol	17	17					
Pyrene	20	20	2623	546	2623		984 - 4262
2,4,5-Trichlorophenol	17	17					
2,4,6-Trichlorophenol	17	17					

Radiological							Units: (Bq/kg)
Americium-241	56	52	120.8	15.8	127.2	1.9	89.0 - 165.4
Cesium-134	67	67	806	72	854	13	598 - 1110
Cesium-137	69	69	566	48	545	8	382 - 709
Cobalt-57	69	65	433	41	421	8	295 - 547
Cobalt-60	61	52	2.9	0.7	2.9	0.2	Sensitivity Evalutation
Iron-55	7	3	447	51	390	8	273 - 507
Manganese-54	68	65	593	57	570	11	399 - 741
Nickel-63	14	11	598	56	640	13	448 - 832
Plutonium-238	35	31	72.6	6.8	72.8	1.1	51.0 - 94.6
Plutonium-239/240	35	26	84.8	7.6	90.1	1.4	63.1 - 117.1
Potassium-40	64	62	601	56	571	15	400 - 742
Strontium-90	29	23	455	53	493	5	345 - 641
Technetium-99	20	16	234	28	273	5	191 - 355
Uranium-234/233	37	34	139	12	142	4	99 - 185
Uranium-235	7						
Uranium-238	45	41	145	15	148	4	104 - 192
Zinc-65	41	37					False Positive Test

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"
(3) Mean for organics in soil is the biweight mean of all the data per NELAC FOPT Table.