MAPEP Mixed Analyte Performance Evaluation Program

Sample Statistical Summary

MAPEP-09-MaS20

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Inorganic							Units: (mg/kg)
Aluminum	4						
Antimony	26	20	66.6	4.7	74.2	0.7	51.9 - 96.5
Arsenic	27	26	91	6	92	1	64 - 120
Barium	28	28	862	92	912	17	638 - 1186
Beryllium	27	27	38.0	2.5	40.0	0.4	28.0 - 52.0
Cadmium	29	27	11.22	1.03	11.99	0.12	8.39 - 15.59
Calcium	4						
Chromium	28	26	76	6	83	1	58 - 108
Cobalt	29	29	127	8	134	1	94 - 174
Copper	29	29	173.8	9.9	178.7	1.7	125.1 - 232.3
Iron	4						
Lead	29	29	83.6	6.9	85.3	1.2	59.7 - 110.9
Magnesium	4						
Manganese	4						
Mercury	24	22	0.1837	0.0155	0.1856	0.0030	0.1299 - 0.2413
Molybdenum	3						
Nickel	29	29	232	17	255	5	179 - 332
Potassium	4						
Selenium	24	12			<0.1		False Positive Test
Silver	28	25	11.56	1.05	12.12	0.12	8.48 - 15.76
Sodium	4						
Technetium-99	2	2			2.73E-4	5.00E-6	1.91E-4 - 3.55E-4
Thallium	27	25	321	22	347	4	243 - 451
Uranium-235	15	14	0.081	0.009	0.091	0.002	0.064 - 0.118
Uranium-238	15	14	11.4	1.1	12.5	0.4	8.8 - 16.3
Uranium-Total	20	20	11.1	1.1	12.6	0.4	8.8 - 16.4
Vanadium	28	28	146.1	9.2	162.7	1.6	113.9 - 211.5
Zinc	29	29	390	33	422	5	295 - 549

Analyte	T(1)	A(2)	Calc(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Organic							Units: (ug/kg)
4,4'-DDD	13	12	52.54	17.09	52.54	3.07	5.25 - 103.80
4,4'-DDE	13	13	293.49	57.80	293.49	5.13	120.08 - 466.90
4,4'-DDT	12	12					
Aldrin	13	12	92.78	20.63	92.78	13.3	30.89 - 154.68
alpha-BHC	13	13	76.75	18.56	76.75	1.72	21.08 - 132.43
beta-BHC	12	12					
delta-BHC	12	12					
Dieldrin	12	12					
Endosulfan I	12	12					
Endosulfan II	12	11					
Endosulfan sulfate	12	12					
Endrin	12	12	90.82	20.20	90.82	4.84	30.21 - 151.42
Endrin Aldehyde	12	12					
Endrin Ketone	12	10					
gamma-BHC (Lindane)	12	12					
Heptachlor	13	13	260.57	55.36	260.57	15.75	94.49 - 426.65
Heptachlor epoxide	12	12					
Methoxychlor	12	12					
1,2,4-Trichlorobenzene	17	17	3120	787	3120	303	760 - 5480

1,2-Dichlorobenzene	16	16					
1,3-Dichlorobenzene	15	15					
1,3-Dinitrobenzene	7	7					
1,4-Dichlorobenzene	16	16					
2,4,5-Trichlorophenol	17	17	7682	1980	7682	650	1743 - 13620
2,4,6-Trichlorophenol	17	17	5577	1314	5577	146	1636 - 9518
2,4-Dichlorophenol	17	17	5300	1320	5300	404	1341 - 9259
2,4-Dimethylphenol	16	14				355	
2,4-Dinitrophenol	16	16					
2,4-Dinitrotoluene	17	17	7065	1723	7065	164	1896 - 12233
2,6-Dichlorophenol	10	10					
2,6-Dinitrotoluene	17	17	2280	516	2280	58	732 - 3828
2-Chloronaphthalene	17	17	7427	1670	7427	273	2417 - 12436
2-Chlorophenol	16	16					
2-Methylnaphthalene	16	16					
2-Methylphenol	17	17	1977	642	1977	85	198 - 3903
2-Nitrophenol	16	16					
3-Methyl & 4-Methylphenol	16	16					
4,6-Dinitro-2-methylphenol	16	16					
4-Bromophenyl-phenylether	15	15					
4-Chloro-3-methylphenol	17	17	3547	811	3547	153	1113 - 5982
4-Chlorophenyl-phenylether	15	15					
4-Nitrophenol	16	16					
Acenaphthene	17	17	5673	1182	5673	155	2127 - 9220
Acenaphthylene	16	16					
Anthracene	17	17	6210	1374	6210	249	2089 - 10332
Benzo(a)anthracene	17	17	4507	879	4507	110	1869 - 7145
Benzo(a)pyrene	16	16					
Benzo(b)fluoranthene	17	16	8116	1730	8116	233	2924 - 13307
Benzo(g,h,i)perylene	16	16					
Benzo(k)fluoranthene	16	15					
bis(2-chloroethoxy)methane	15	15					
bis(2-chloroethyl)ether	15	15					
bis(2-chloroisopropyl)ether	15	15					
Bis(2-ethylhexyl)phthalate	17	17	8115	1812	8115	295	2679 - 13550
Butylbenzylphthalate	16	16					
Chrysene	17	17	7766	1638	7766	243	2852 - 12681
Di-n-butylphthalate	17	17	3913	955	3913	224	1049 - 6778
Di-n-octylphthalate	17	17	4378	1185	4378	205	822 - 7934
Dibenzo(a,h)anthracene	17	17	4249	920	4249	147	1490 - 7008
Dibenzofuran	16	16					
Diethylphthalate	17	17	7616	1806	7616	618	2200 - 13033
Dimethylphthalate	17	17	7671	1572	7671	342	2954 - 12388
Fluoranthene	17	17	5726	1121	5726	186	2364 - 9088
Fluorene	17	17	3143	649	3143	74	1195 - 5091
Hexachlorobenzene	17	17	1678	352	1678	46	623 - 2733
Hexachlorobutadiene	17	17	2414	651	2414	235	461 - 4367
Hexachlorocyclopentadiene	16	11	522	244	522	196	52 - 1256
Hexachloroethane	17	17	1953	623	1953	464	195 - 3823
Indeno(1,2,3-c,d)pyrene	16	12					
Isophorone	16	16					
Naphthalene	16	15					
Nitrobenzene	16	16					
Pentachlorophenol	16	16					
Phenanthrene	16	15					
Phenol	16	16					
Pyrene	17	17	3263	676	3263	69	1235 - 5290

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Radiological							Units: (Bq/kg)
Americium-241	59	50	37.1	5.0	38.3	0.6	26.8 - 49.8
Antimony-125	5						
Cesium-134	73	72	440	46	467	7	327 - 607
Cesium-137	74	74	626	56	605	9	424 - 787
Cobalt-57	50	46					False Positive Test
Cobalt-58	1						
Cobalt-60	65	62	4.246	1.894	4.113	0.108	Sensitivity Evalutation
Iron-55	6	6	972	136	983	20	688 - 1278
Manganese-54	73	71	323	29	307	6	215 - 399
Nickel-63	13	11	498.6	40.6	514.9	10.3	360.4 - 669.4
Plutonium-238	34	29	25.7	2.4	25.3	0.4	17.7 - 32.9
Plutonium-239/240	34	27	0.47	0.74	0.29	0.04	Sensitivity Evalutation
Potassium-40	66	64	614	54	570	17	399 - 741
Strontium-90	32	27	245	33	257	3	180 - 334
Technetium-99	22	19	169	24	171	3	120 - 222
Uranium-234/233	37	35	143	11	149	4	104 - 194
Uranium-235	7						
Uranium-238	44	43	148	13	155	5	109 - 202
Zinc-65	73	69	256	22	242	5	169 - 315

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.