



Study: MAPEP-07-MaS17: Radiological, inorganic and semi-volatile organics combined soil standard

Lab: SEMLO1 - SRS Environmental Monitoring Laboratory

Bldg 735-B

Aiken, SC 29808

MAPEP-07-MaS17: Radiological, inorganic and semi-volatile organics combined soil standard								
Inorganic							Units: (mg/kg)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	84				59 - 109		
Arsenic	NR	37				26 - 48		
Barium	NR	121				85 - 157		
Beryllium	NR	45.3				31.7 - 58.9		
Cadmium	NR	11.0				7.7 - 14.3		
Chromium	NR	71				50 - 92		
Cobalt	NR	110				77 - 143		
Copper	NR	120				84 - 156		
Lead	NR	69				48 - 90		
Nickel	NR	79				55 - 103		
Selenium	NR	<0.2						
Silver	NR	88.3				61.8 - 114.8		
Thallium	NR	118				83 - 153		
Uranium-Total	NR	15.6				10.9 - 20.3		
Uranium-235	NR	0.11				0.08 - 0.14		
Uranium-238	NR	15.5				10.9 - 20.2		
Vanadium	NR	79				55 - 103		
Zinc	NR	67				47 - 87		
Radiological							Units: (Bq/kg)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	28.2	34.8	A		-19.0	24.4 - 45.2	1.9	
Cesium-134	277	327.4	A		-15.4	229.2 - 425.6	6.3	L
Cesium-137	765.9	799.7	A		-4.2	559.8 - 1039.6	24	
Cobalt-57	430.2	471.2	A		-8.7	329.8 - 612.6	11.4	L
Cobalt-60	261.6	274.7	A		-4.8	192.3 - 357.1	5.4	L
Iron-55	NR	807.6				565.3 - 1049.9		
Manganese-54	675.6	685.2	A		-1.4	479.6 - 890.8	29.3	
Nickel-63	NR	585.0				409.5 - 760.5		
Plutonium-238	32.2	31.3	A		2.9	21.9 - 40.7	2.2	
Plutonium-239/240	42.0	44.5	A		-5.6	31.2 - 57.9	2.7	
Potassium-40	593.2	602	A		-1.5	421 - 783	23.8	
Strontium-90	269.8	319.0	A		-15.4	223.3 - 414.7	12	
Technetium-99	NR							
Uranium-234/233	152	185.0	A		-17.8	129.5 - 240.5	10.6	
Uranium-238	157	192.4	A		-18.4	134.7 - 250.1	11	
Zinc-65	542	536.8	A		1.0	375.8 - 697.8	19.1	
Organic							Units: (ug/kg)	

Analyte	Result	Assnd Value	Flag	Notes	Z-Score	Acceptance Range	Unc Value	Unc Flag
Hexachloroethane	NR	193.0				QL - 479.9		
2,4-Dimethylphenol	NR	180						
2,4-Dichlorophenol	NR	4762				347 - 9177		
1,2,4-Trichlorobenzene	NR	2460				146 - 4775		
Hexachlorobutadiene	NR	1744				295 - 3193		
4-Chloro-3-methylphenol	NR	2520				89 - 4951		
2-Methylphenol	NR	167.5				QL - 405.6		
Hexachlorocyclopentadiene	NR	174.5				QL - 446.9		
2,4,6-Trichlorophenol	NR	1168				50 - 2285		
2-Chloronaphthalene	NR	1049				355 - 1742		
Dimethylphthalate	NR	4100				1192 - 7009		
2,6-Dinitrotoluene	NR	2347				968 - 3726		
Acenaphthene	NR	1367				375 - 2359		
2,4-Dinitrotoluene	NR	1555				533 - 2577		
Fluorene	NR	3048				988 - 5108		
Diethylphthalate	NR	2505				633 - 4378		
Hexachlorobenzene	NR	1754				466 - 3043		
Anthracene	NR	1547				469 - 2625		
Di-n-butylphthalate	NR	3954				1635 - 6273		
Fluoranthene	NR	5822				1659 - 9986		
Pyrene	NR	2313				812 - 3815		
Benzo(a)anthracene	NR	2786				1012 - 4561		
Chrysene	NR	3446				1146 - 5746		
Bis(2-ethylhexyl)phthalate	NR	2760				889 - 4630		
Di-n-octylphthalate	NR	1141				244 - 2038		
Benzo(b)fluoranthene	NR	1793				658 - 2928		
Dibenzo(a,h)anthracene	NR	1029				153 - 1905		
alpha-BHC	NR	20.06				10.69 - 29.43		
Heptachlor	NR	9.23				QL - 29.91		
Aldrin	NR	63.47				30.90 - 96.05		
4,4'-DDE	NR	123.7				1.5 - 245.9		
Dieldrin	NR	18.1				QL - 38.1		
Endrin	NR	5.32				QL - 10.82		
4,4'-DDD	NR	16.43				QL - 42.23		
4,4'-DDT	NR	29.50				QL - 78.66		



Study: MAPEP-07-RdV17: Radiological vegetation

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MAPEP-07-RdV17: Radiological vegetation								
Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-Total	NR	22.1				15.5 - 28.7		
Uranium-235	NR	0.16				0.11 - 0.21		
Uranium-238	NR	21.9				15.3 - 28.5		
Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.167	0.1806	A		-7.5	0.1264 - 0.2348	0.12	H
Cesium-134	7.14	6.2101	A		15.0	4.3471 - 8.0731	0.55	
Cesium-137	7.63	6.9949	A		9.1	4.8964 - 9.0934	0.85	
Cobalt-57	8.83	8.1878	A		7.8	5.7315 - 10.6441	0.74	
Cobalt-60	6.26	5.8215	A		7.5	4.0751 - 7.5680	0.54	
Manganese-54	9.37	8.4492	A		10.9	5.9144 - 10.9840	0.95	
Plutonium-238	0.170	0.1484	A		14.6	0.1039 - 0.1929	0.012	
Plutonium-239/240	0.235	0.2135	A		10.1	0.1495 - 0.2776	0.016	
Strontium-90	1.60	1.5351	A		4.2	1.0746 - 1.9956	0.11	
Uranium-234/233	NR	0.2624				0.1837 - 0.3411		
Uranium-238	NR	0.2724				0.1907 - 0.3541		
Zinc-65	8.74	5.6991	N		53.4	3.9894 - 7.4088	1.27	



Study: MAPEP-07-RdF17: Radiological air filter

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MAPEP-07-RdF17: Radiological air filter								
Inorganic					Units: (ug/sample)			
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-Total	NR	8.3				5.8 - 10.8		
Uranium-235	NR	0.059				0.041 - 0.077		
Uranium-238	NR	8.2				5.7 - 10.7		
Radiological					Units: (Bq/sample)			
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.086	0.0977	A		-12.0	0.0684 - 0.1270	0.006	
Cesium-134	3.42	4.1960	A		-18.5	2.9372 - 5.4548	0.14	
Cesium-137	2.33	2.5693	A		-9.3	1.7985 - 3.3401	0.18	
Cobalt-57	2.92	2.8876	A		1.1	2.0213 - 3.7539	0.14	
Cobalt-60	2.74	2.9054	A		-5.7	2.0338 - 3.7770	0.14	
Manganese-54	3.29	3.5185	A		-6.5	2.4630 - 4.5741	0.23	
Plutonium-238	0.059	0.0669	A		-11.8	0.0468 - 0.0870	0.004	
Plutonium-239/240	0.079	0.0839	A		-5.8	0.0587 - 0.1091	0.0055	
Strontium-90	0.60	0.6074	A		-1.2	0.4252 - 0.7896	0.021	
Uranium-234/233	0.091	0.0981	A		-7.2	0.0687 - 0.1275	0.0064	
Uranium-238	0.089	0.1021	A		-12.8	0.0715 - 0.1327	0.0062	
Zinc-65	2.23	2.6828	A		-16.9	1.8780 - 3.4876	0.34	



Study: MAPEP-07-GrF17: Gross alpha/beta air filter

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MAPEP-07-GrF17: Gross alpha/beta air filter								
Radiological					Units: (Bq/sample)			
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.34	0.601	A		-43.4	>0.0 - 1.202	0.03	
Gross beta	0.46	0.441	A		4.3	0.221 - 0.662	0.04	



Study: MAPEP-07-GrW17: Gross alpha/beta water

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MAPEP-07-GrW17: Gross alpha/beta water								
Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.48	0.327	A		46.8	>0.0 - 0.654	0.15	H
Gross beta	0.93	0.851	A		9.3	0.426 - 1.277	0.24	H



Study: MAPEP-07-MaW17: Radiological, inorganic combined water standard

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MAPEP-07-MaW17: Radiological, inorganic combined water standard								
Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	2.32	2.07	A		12.1	1.45 - 2.69	0.052	L
Arsenic	2.49	2.44	A		2.0	1.71 - 3.17	0.069	L
Barium	0.696	0.675	A		3.1	0.473 - 0.878	0.009	L
Beryllium	0.493	0.497	A		-0.8	0.348 - 0.646	0.002	L
Cadmium	0.818	0.797	A		2.6	0.558 - 1.036	0.009	L
Chromium	2.06	1.98	A		4.0	1.39 - 2.57	0.02	L
Cobalt	1.74	1.70	A		2.4	1.19 - 2.21	0.022	L
Copper	<0.01	<0.025	A				0.001	
Lead	0.905	0.894	A		1.2	0.626 - 1.162	0.013	L
Mercury	0.0158	0.0177	A		-10.7	0.0124 - 0.0230	0.001	
Nickel	<0.01	<0.01	A				0.004	
Selenium	0.607	0.573	A		5.9	0.401 - 0.745	0.065	
Technetium-99	NR	0.0000167				0.0000117 - 0.0000217		
Thallium	0.882	0.848	A		4.0	0.594 - 1.102	0.013	L
Uranium-Total	NR	0.201				0.141 - 0.261		
Uranium-235	NR	0.00156				0.00109 - 0.00203		
Uranium-238	NR	0.199				0.139 - 0.259		
Vanadium	1.30	1.22	A		6.6	0.85 - 1.59	0.013	L
Zinc	3.29	3.30	A		-0.3	2.31 - 4.29	0.043	L
Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.61	1.71	A		-5.8	1.20 - 2.22	0.11	
Cesium-134	76.6	83.5	A		-8.3	58.5 - 108.6	14.8	
Cesium-137	171.8	163.0	A		5.4	114.1 - 211.9	5.48	
Cobalt-57	150.2	143.7	A		4.5	100.6 - 186.8	3.7	L
Cobalt-60	28.2	26.9	A		4.8	18.8 - 35.0	6.8	H
Hydrogen-3	274.6	283.0	A		-3.0	198.1 - 367.9	1.6	L
Iron-55	NR	129.3				90.5 - 168.1		
Manganese-54	133.6	123.8	A		7.9	86.7 - 160.9	3.9	L
Nickel-63	NR	130.4				91.3 - 169.5		
Plutonium-238	2.15	2.25	A		-4.4	1.58 - 2.93	0.15	
Plutonium-239/240	2.05	2.22	A		-7.7	1.55 - 2.89	0.14	
Strontium-90	8.14	8.87	A		-8.2	6.21 - 11.53	0.48	
Technetium-99	9.91	10.5	A		-5.6	7.4 - 13.7	0.74	
Uranium-234/233	2.56	2.49	A		2.8	1.74 - 3.24	0.18	
Uranium-238	2.67	2.48	A		7.7	1.74 - 3.22	0.19	
Zinc-65	129.9	114.8	A		13.2	80.4 - 149.2	4.08	