APCA 5 - remove 7/2 - 7/6

Rachel Tao

1/23/2021

Loadings

element	MeanConc	source_1	source_2	source_3	source_4	source_5	r_squared	PredConc	Pct_error
aluminum	22.18	3.51	0.24	22.09	1.01	1.83	0.57	28.69	29.34
ammonium	1120.78	1057.19	-4.34	223.73	90.96	-275.00	0.95	1092.54	-2.52
arsenic	0.49	0.23	0.01	0.03	0.03	0.09	0.16	0.40	-18.43
barium	1.87	0.38	0.20	0.62	-0.07	1.87	0.29	3.00	60.55
bromine	3.06	1.55	0.36	0.06	0.12	0.79	0.38	2.87	-6.20
cadmium	1.68	-0.04	-0.05	0.10	0.06	0.15	0.00	0.22	-86.80
$\operatorname{calcium}$	51.85	11.55	3.64	15.75	12.43	3.43	0.52	46.80	-9.73
chlorine	37.07	14.27	43.84	-9.10	5.01	2.03	0.70	56.05	51.21
chromium	2.13	-0.71	-0.31	0.64	1.33	-0.49	0.08	0.46	-78.43
copper	4.55	1.83	-0.05	0.68	0.85	1.82	0.66	5.14	12.90
EC	707.73	236.95	1.11	112.93	114.32	197.64	0.54	662.95	-6.33
iron	105.50	20.82	-1.10	32.93	14.06	21.32	0.73	88.03	-16.56
lead	2.02	1.24	0.13	-0.18	0.43	0.99	0.44	2.61	29.52
magnesium	7.12	0.05	6.23	0.81	-1.05	0.96	0.86	6.99	-1.71
manganese	2.10	0.79	0.03	0.48	0.63	0.25	0.75	2.18	3.54
nickel	4.94	1.57	0.13	0.24	2.34	-1.13	0.85	3.15	-36.23
nitrate	1613.47	1122.43	119.17	-117.56	402.93	61.97	0.59	1588.94	-1.52
OC	2693.20	1101.70	-52.58	484.15	-56.37	538.79	0.82	2015.69	-25.16
pm25	10322.11	5874.36	131.93	1946.34	190.35	603.17	0.88	8746.16	-15.27
potassium	36.15	23.52	4.70	1.94	0.81	15.64	0.33	46.61	28.92
selenium	0.40	0.29	0.01	0.07	0.01	-0.03	0.29	0.36	-9.08
silicon	61.01	7.87	2.00	58.21	3.97	3.25	0.88	75.30	23.42
sodium	95.65	6.21	58.81	13.23	3.94	-14.75	0.89	67.44	-29.49
sulfur	788.05	582.34	-13.33	261.63	-64.51	-144.31	0.89	621.82	-21.09
titanium	2.37	0.44	-0.01	1.79	0.06	0.51	0.57	2.78	17.42
vanadium	2.86	1.95	0.10	0.98	0.56	0.00	0.44	3.59	25.73
zinc	26.09	11.72	1.87	-5.72	9.40	8.24	0.74	25.51	-2.24

Source proportions

element	source_1	source_2	source_3	source_4	source_5
aluminum	12.25	0.83	77.02	3.51	6.40
ammonium	77.06	0.00	16.31	6.63	0.00
arsenic	58.41	2.79	6.61	8.57	23.62
barium	12.50	6.65	20.14	0.00	60.71
bromine	53.89	12.45	1.97	4.19	27.51
$\operatorname{cadmium}$	0.00	0.00	31.04	19.13	49.83
calcium	24.67	7.77	33.66	26.56	7.34
chlorine	21.90	67.28	0.00	7.70	3.12
chromium	0.00	0.00	32.51	67.49	0.00
copper	35.27	0.00	13.21	16.38	35.14
EC	35.74	0.17	17.03	17.24	29.81
iron	23.35	0.00	36.95	15.77	23.92
lead	44.43	4.78	0.00	15.26	35.53
magnesium	0.58	77.40	10.12	0.00	11.90
manganese	36.20	1.24	22.09	28.86	11.61
nickel	36.60	3.07	5.64	54.69	0.00
nitrate	65.77	6.98	0.00	23.61	3.63
OC	51.85	0.00	22.79	0.00	25.36
pm25	67.17	1.51	22.25	2.18	6.90
potassium	50.47	10.08	4.16	1.73	33.55
selenium	74.99	2.60	19.12	3.29	0.00
silicon	10.45	2.66	77.30	5.28	4.31
sodium	7.55	71.55	16.10	4.80	0.00
sulfur	69.00	0.00	31.00	0.00	0.00
titanium	15.75	0.00	63.99	2.05	18.20
vanadium	54.21	2.90	27.22	15.64	0.03
zinc	37.52	5.97	0.00	30.11	26.39

Bar graph of the above proportions

