

# APCA factors = 5

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## Predicted concentration and Percent Error

element	MeanConc	source_1	source_2	source_3	source_4	source_5	r_squared	PredConc	Pct_error
aluminum	20.906	2.987	21.279	-1.814	1.100	1.836	0.618	25.389	21.45
arsenic	0.657	0.330	0.031	0.140	0.017	0.021	0.335	0.539	-17.97
barium	6.227	1.181	1.975	2.338	-0.270	-0.867	0.318	4.356	-30.04
bromine	3.312	2.251	0.072	0.342	0.188	-0.119	0.604	2.734	-17.46
cadmium	1.510	0.125	0.079	-0.117	0.002	-0.074	0.011	0.015	-99.01
calcium	56.074	34.669	22.139	-2.731	-1.093	-3.724	0.728	49.261	-12.15
chromium	1.628	-0.398	-0.225	-0.002	-0.099	3.233	0.279	2.510	54.20
copper	4.483	2.572	0.689	0.003	0.155	1.266	0.574	4.685	4.49
iron	111.841	35.270	31.595	5.184	0.868	35.781	0.970	108.698	-2.81
lead	3.293	3.045	0.592	0.680	-0.015	-0.412	0.609	3.891	18.14
magnesium	7.682	0.186	1.115	0.019	0.532	-0.492	0.051	1.359	-82.30
manganese	2.373	1.870	0.773	0.031	-0.034	0.300	0.681	2.939	23.84
nickel	8.590	6.239	0.855	2.204	-1.008	-0.408	0.930	7.883	-8.24
nitrate	1811.742	1682.344	-	242.865	47.827	68.840	0.592	1917.253	5.82
			124.623						
pm25	11855.453	5212.280	1572.529	1804.037	614.244	304.989	0.755	9508.079	-19.80
potassium	47.913	17.509	12.365	3.057	2.461	-1.099	0.157	34.292	-28.43
selenium	0.755	0.591	0.087	0.324	0.044	-0.078	0.752	0.967	28.09
silicon	72.073	8.327	62.049	4.272	2.026	-7.452	0.900	69.222	-3.96
sulfate	3008.629	948.608	557.440	812.857	261.823	-68.843	0.734	2511.886	-16.51
titanium	3.445	0.554	2.411	0.512	-0.026	-0.035	0.710	3.416	-0.84
vanadium	4.449	3.333	1.143	1.054	-0.042	-0.020	0.701	5.468	22.90
zinc	26.876	28.839	0.462	-1.574	-0.183	-2.431	0.873	25.114	-6.56

## Proportion of each element coming from each source

element	source_1	source_2	source_3	source_4	source_5
aluminum	10.98	78.23	0.00	4.05	6.75
arsenic	61.18	5.72	25.94	3.20	3.96
barium	21.49	35.95	42.56	0.00	0.00
bromine	78.91	2.51	11.99	6.59	0.00
cadmium	60.63	38.22	0.00	1.15	0.00
calcium	61.03	38.97	0.00	0.00	0.00
chromium	0.00	0.00	0.00	0.00	100.00
copper	54.90	14.71	0.06	3.30	27.03
iron	32.45	29.07	4.77	0.80	32.92
lead	70.54	13.71	15.76	0.00	0.00

element	source_1	source_2	source_3	source_4	source_5
magnesium	10.03	60.23	1.00	28.73	0.00
manganese	62.89	25.99	1.04	0.00	10.08
nickel	67.10	9.20	23.70	0.00	0.00
nitrates	82.39	0.00	11.89	2.34	3.37
pm25	54.82	16.54	18.97	6.46	3.21
potassium	49.47	34.94	8.64	6.95	0.00
selenium	56.53	8.34	30.97	4.17	0.00
silicon	10.86	80.93	5.57	2.64	0.00
sulfate	36.76	21.60	31.50	10.15	0.00
titanium	15.92	69.34	14.73	0.00	0.00
vanadium	60.28	20.67	19.05	0.00	0.00
zinc	98.42	1.58	0.00	0.00	0.00

Bar graph of proportion of each element coming from each element

