



Appendix B: 2017 Fine Particulate Speciation Summary

New Jersey Department of Environmental Protection

Table 1
2017 Fine Particulate Speciation Concentrations
CAMDEN SPRUCE STREET NJ
Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)

	Pollutant	Annual Average	Maximum Daily Average
1	Aluminum	0.032	0.176
2	Ammonium Ion	0.454	3.112
3	Antimony	0.004	0.049
4	Arsenic	0.0004	0.006
5	Barium	0.004	0.090
6	Bromine	0.003	0.014
7	Cadmium	0.001	0.024
8	Calcium	0.083	0.925
9	Carbon, Elemental	0.651	2.101
10	Carbon, Organic	2.273	6.072
11	Cerium	0.004	0.090
12	Cesium	0.004	0.061
13	Chlorine	0.297	8.496
14	Chromium	0.005	0.077
15	Cobalt	0.00001	0.004
16	Copper	0.006	0.023
17	Indium	0.001	0.028
18	Iron	0.136	0.968
19	Lead	0.004	0.028
20	Magnesium	0.011	0.140
21	Manganese	0.002	0.009
22	Nickel	0.002	0.022
23	Nitrate	0.888	5.513
24	Phosphorus	0.0004	0.007
25	Potassium	0.107	0.718
26	Potassium Ion	0.071	0.717
27	Rubidium	0.001	0.010
28	Selenium	0.0003	0.006
29	Silicon	0.058	0.287
30	Silver	0.003	0.020
31	Sodium	0.091	0.673
32	Sodium Ion	0.132	1.914
33	Strontium	0.001	0.005
34	Sulfate	1.071	6.177
35	Sulfur	0.380	1.570
36	Tin	0	0.058
37	Titanium	0.003	0.011
38	Vanadium	0.0004	0.003
39	Zinc	0.026	0.133
40	Zirconium	0.001	0.044

Table 2
2017 Fine Particulate Speciation Concentrations
CHESTER NJ
 Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)

	Pollutant	Annual Average	Maximum Daily Average
1	Aluminum	0.017	0.175
2	Ammonium Ion	0.206	1.346
3	Antimony	0.006	0.062
4	Arsenic	0.0002	0.006
5	Barium	0.003	0.069
6	Bromine	0.001	0.006
7	Cadmium	0.002	0.032
8	Calcium	0.023	0.095
9	Carbon, Elemental	0.269	0.896
10	Carbon, Organic	1.505	4.493
11	Cerium	0.004	0.090
12	Cesium	0	0.059
13	Chlorine	0.001	0.071
14	Chromium	0.003	0.020
15	Cobalt	0.0001	0.003
16	Copper	0.004	0.017
17	Indium	0.001	0.013
18	Iron	0.034	0.156
19	Lead	0.002	0.013
20	Magnesium	0.001	0.052
21	Manganese	0.0003	0.004
22	Nickel	0.001	0.005
23	Nitrate	0.631	3.485
24	Phosphorus	0.0003	0.004
25	Potassium	0.041	0.176
26	Potassium Ion	0.015	0.064
27	Rubidium	0.0003	0.007
28	Selenium	0.0005	0.004
29	Silicon	0.030	0.209
30	Silver	0.001	0.025
31	Sodium	0.035	0.369
32	Sodium Ion	0.029	0.228
33	Strontium	0.0005	0.005
34	Sulfate	0.763	2.198
35	Sulfur	0.283	0.909
36	Tin	0.003	0.048
37	Titanium	0.002	0.013
38	Vanadium	0.0004	0.002
39	Zinc	0.007	0.033
40	Zirconium	0.002	0.045

Table 3
2017 Fine Particulate Speciation Concentrations
ELIZABETH LAB NJ
 Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)

	Pollutant	Annual Average	Maximum Daily Average
1	Aluminum	0.039	0.396
2	Ammonium Ion	0.304	2.229
3	Antimony	0.002	0.045
4	Arsenic	0.0001	0.006
5	Barium	0.012	0.108
6	Bromine	0.002	0.015
7	Cadmium	0.0001	0.016
8	Calcium	0.052	0.269
9	Carbon, Elemental	1.024	2.784
10	Carbon, Organic	2.374	6.268
11	Cerium	0.001	0.140
12	Cesium	0.002	0.062
13	Chlorine	0.008	0.132
14	Chromium	0.004	0.061
15	Cobalt	0	0.002
16	Copper	0.008	0.028
17	Indium	0	0.024
18	Iron	0.149	0.562
19	Lead	0.002	0.018
20	Magnesium	0.015	0.175
21	Manganese	0.002	0.014
22	Nickel	0.001	0.015
23	Nitrate	1.030	6.597
24	Phosphorus	0.001	0.010
25	Potassium	0.058	0.380
26	Potassium Ion	0.026	0.470
27	Rubidium	0	0.008
28	Selenium	0.001	0.006
29	Silicon	0.087	0.730
30	Silver	0.002	0.018
31	Sodium	0.051	0.450
32	Sodium Ion	0.065	1.042
33	Strontium	0.001	0.012
34	Sulfate	0.922	2.815
35	Sulfur	0.356	1.068
36	Tin	0.002	0.040
37	Titanium	0.006	0.029
38	Vanadium	0.0002	0.004
39	Zinc	0.014	0.036
40	Zirconium	0.002	0.036

Table 4
2017 Fine Particulate Speciation Data
NEWARK FIREHOUSE NJ
Concentrations in Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)

	Pollutant	Annual Average	Maximum Daily Average
1	Aluminum	0.030	0.749
2	Ammonium Ion	0.270	1.641
3	Antimony	0.003	0.051
4	Arsenic	0.0004	0.010
5	Barium	0.009	0.083
6	Bromine	0.002	0.009
7	Cadmium	0.001	0.025
8	Calcium	0.047	0.325
9	Carbon, Elemental	0.640	1.937
10	Carbon, Organic	2.276	6.387
11	Cerium	0.009	0.112
12	Cesium	0.004	0.056
13	Chlorine	0.014	0.509
14	Chromium	0.005	0.325
15	Cobalt	0	0.008
16	Copper	0.008	0.049
17	Indium	0.0004	0.037
18	Iron	0.112	1.202
19	Lead	0.001	0.021
20	Magnesium	0.014	0.083
21	Manganese	0.001	0.013
22	Nickel	0.002	0.114
23	Nitrate	1.029	6.226
24	Phosphorus	0.001	0.008
25	Potassium	0.056	0.375
26	Potassium Ion	0.024	0.321
27	Rubidium	0.0002	0.010
28	Selenium	0.0002	0.005
29	Silicon	0.077	1.388
30	Silver	0.001	0.028
31	Sodium	0.066	0.739
32	Sodium Ion	0.060	0.641
33	Strontium	0.001	0.010
34	Sulfate	0.805	2.130
35	Sulfur	0.323	0.899
36	Tin	0.001	0.046
37	Titanium	0.005	0.038
38	Vanadium	0.0002	0.002
39	Zinc	0.014	0.077
40	Zirconium	0.004	0.040

Table 5
2017 Fine Particulate Speciation Data
RUTGERS UNIVERSITY NJ
 Concentrations in Micrograms per Cubic Meter ($\mu\text{g}/\text{m}^3$)

	Pollutant	Annual Average	Maximum Daily Average
1	Aluminum	0.021	0.489
2	Ammonium Ion	0.202	1.774
3	Antimony	0.0002	0.044
4	Arsenic	0.0002	0.004
5	Barium	0.008	0.080
6	Bromine	0.001	0.008
7	Cadmium	0	0.018
8	Calcium	0.024	0.120
9	Carbon, Elemental	0.477	1.867
10	Carbon, Organic	2.039	7.700
11	Cerium	0.004	0.114
12	Cesium	0.003	0.086
13	Chlorine	0.005	0.301
14	Chromium	0.005	0.073
15	Cobalt	0	0.005
16	Copper	0.005	0.017
17	Indium	0	0.022
18	Iron	0.062	0.292
19	Lead	0.002	0.025
20	Magnesium	0.012	0.135
21	Manganese	0.001	0.012
22	Nickel	0.002	0.024
23	Nitrate	0.772	5.616
24	Phosphorus	0.0003	0.003
25	Potassium	0.048	0.307
26	Potassium Ion	0.021	0.311
27	Rubidium	0	0.005
28	Selenium	0.001	0.006
29	Silicon	0.043	0.920
30	Silver	0.002	0.026
31	Sodium	0.044	0.398
32	Sodium Ion	0.049	0.334
33	Strontium	0.001	0.011
34	Sulfate	0.745	2.177
35	Sulfur	0.296	0.864
36	Tin	0.003	0.051
37	Titanium	0.003	0.030
38	Vanadium	0.0003	0.004
39	Zinc	0.008	0.023
40	Zirconium	0.002	0.045