

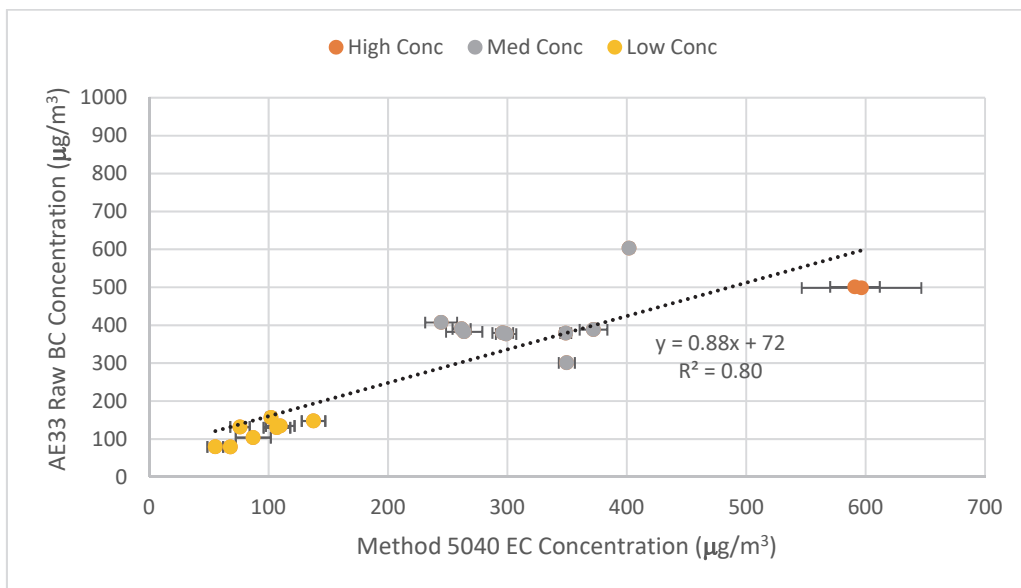
## Supplemental Information

**Table S1.** EC concentration derived from Standard 5040 Method analysis on each replicate filter in all laboratory tests. Highlighted values were identified as outliers (i.e., value was greater than  $3\sigma$  away from the average). NA indicates that no data were available because the sample filter was not seated properly in the cassette.

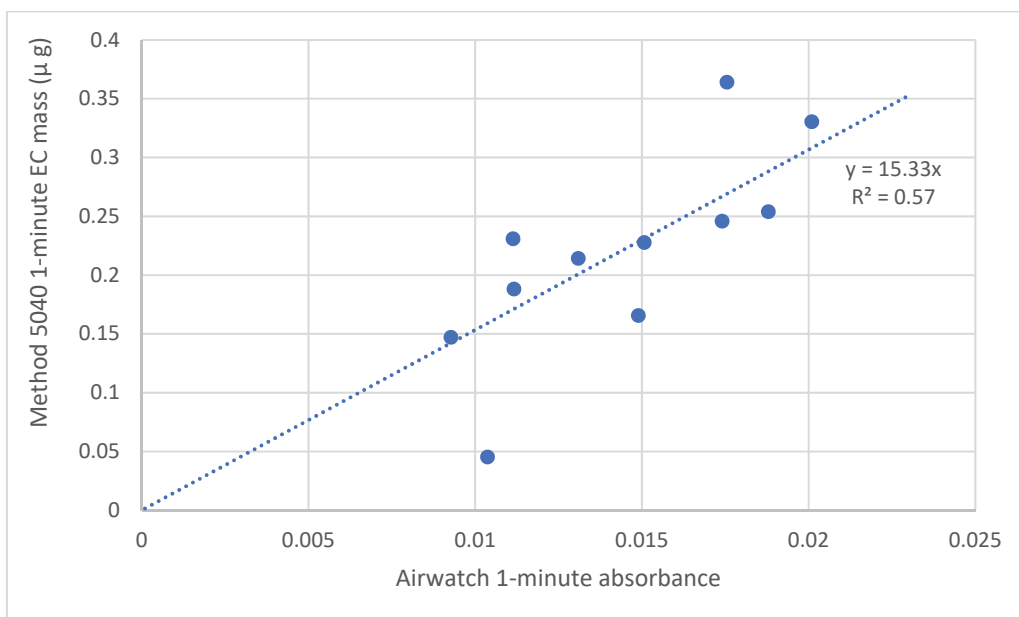
Test	EC 5040 results ( $\mu\text{g m}^{-3}$ )							Total samples used
	Filter A	Filter B	Filter C	Filter D	Filter E	Average	95% CI	
1	174.65	164.65	163.58	99.77	123.87	167.63	6.91	3
2	97.19	118.44	97.19	115.09	61.37	106.98	11.16	4
3	105.75	116.64	111.09	126.32	89.53	109.87	11.99	5
4	125.63	144.93	104.15	146.89	133.37	137.71	9.82	4
5	66.44	49.45	60.16	50.83	50.22	55.42	6.61	5
6	99.17	89.05	213.08	73.39	171.85	87.20	14.69	3
7	72.04	82.46	86.49	62.71	77.18	76.18	8.14	5
8	98.47	99.81	107.21	NA	102.96	102.11	3.81	4
9	380.09	294.33	294.80	307.68	533.22	298.94	8.57	3
10	349.24	352.78	406.75	344.69	264.06	348.90	4.59	3
11	302.22	381.25	376.76	354.78	375.72	372.13	11.57	4
12	348.20	306.37	344.70	295.49	356.29	349.73	6.72	3
13	265.69	236.24	253.39	257.35	270.35	261.70	7.56	4
14	242.42	287.75	268.13	268.31	252.44	263.81	15.17	5
15	246.59	335.40	255.28	231.84	NA	244.57	13.41	3
16	297.16	255.94	303.26	249.37	288.09	296.17	8.64	3
17	396.89	404.02	403.78	380.50	403.39	402.02	3.36	4
18	550.54	600.54	638.74	314.62	746.73	596.61	50.05	3
19	575.61	524.93	610.31	424.93	589.27	591.06	20.83	3

**Table S2.** Summary of all laboratory test results. NA indicates that 95% confidence interval could not be calculated due to test only having one sample; ND indicates that a full filter spot was not available to determine this value.

Test	EC Concentration ( $\mu\text{g}/\text{m}^3$ )			BC Concentration ( $\mu\text{g}/\text{m}^3$ )			Airwatch 1-min absorbance	Method 5040 1-min EC ( $\mu\text{g}$ )
	Method 5040	OC-EC Field Analyzer	Airtec	AE33 raw	AE33 corrected	AE33 first minute		
1	68.2 (0)	68.2	115.3 (8)	78.8	135.0	118.6 (21)	ND	0.15
2	107 (11.2)	96.4	138.4 (4.9)	129.8	223.9	207.1 (37.5)	0.0071	0.24
3	109.9 (12)	92.1	148.5 (8.8)	134.5	205.2	192.9 (19.4)	0.0067	0.24
4	137.7 (9.8)	124.1	158.6 (4.3)	147.3	231.5	263.3 (50.1)	0.0096	0.30
5	55.4 (6.6)	42.6	70.9 (2.1)	79.3	94.3	105.4 (27.6)	ND	0.12
6	87.2 (14.7)	54.5	105.8 (2.9)	103.8	128.4	140.2 (NA)	ND	0.19
7	76.2 (8.1)	67.3	128.3 (4)	131.5	164.1	159.2 (17.6)	0.00370	0.17
8	102.1 (3.8)	95.5	133.9 (4.3)	156.4	208.9	205.7 (10.5)	0.00510	0.22
9	298.9 (8.6)	292.6	493.1 (39)	376.9	-	521.9 (117.8)	0.02500	0.66
10	348.9 (4.6)	298.5	375.8 (54.4)	379.1	-	550.4 (135.2)	0.01800	0.77
11	372.1 (11.6)	330.2	361.8 (20.1)	388.4	-	623 (26.4)	0.02900	0.82
12	349.7 (6.7)	302.6	376.9 (8.7)	300.9	-	568.4 (54.2)	0.02100	0.77
13	261.7 (7.6)	210.7	337.4 (17.3)	390.4	-	496.8 (17.8)	0.01200	0.58
14	263.8 (15.2)	216.2	373.7 (33.7)	382.5	-	474.3 (31.6)	0.00890	0.58
15	244.6 (13.4)	209.1	374.6 (24.9)	407.2	-	481.3 (57.4)	0.00980	0.54
16	296.2 (8.6)	213.1	399.4 (19.6)	379.7	-	472.7 (19.2)	0.01400	0.65
17	402 (3.4)	364.7	501.2 (57.2)	603.1	-	748.7 (27)	0.02100	0.88
18	596.6 (50.1)	574.2	642.6 (73.9)	498.3	-	730 (309.4)	0.05100	1.31
19	591.1 (20.8)	501.6	557.5 (19.4)	500.9	-	822.1 (62.6)	0.03300	1.30



**Figure S1.** AE33 BC uncorrected (raw) concentration as a function of 5040 EC concentration. Error bars represent 95% confidence in replicate 5040 values.



**Figure S2.** Airwatch calibration curve generated from raw data collected by Barrett et al. (2017). The plot was generated using the same analysis as used for Fig. 6 in the current study (i.e., by determining average EC accumulated on the Airwatch filter per minute and the average absorbance per minute). It is noted that each of the tests represented in this plot only used one filter spot, which would have been considered a “partial” spot in the current study.