

Table S1. Concentrations of organic compounds in MMA (PM_{2.5}) in ng m⁻³

	Spring 2011				Fall 2011				Spring 2012				Fall 2012			
	Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime	
	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD
<i>Triterpanes (hopanes)</i>																
17a,21b-29-hopane	1.12	0.40	0.59	0.32	1.66	0.67	1.21	0.43	0.56	0.19	0.90	0.43	1.04	0.57	0.58	0.24
17a, 21b -hopane	0.89	0.41	0.44	0.20	2.36	1.37	1.84	0.86	0.50	0.11	1.31	0.63	1.49	0.78	0.68	0.31
22S 17a,21b-30-homohopane	0.25	0.16	0.11	0.09	0.78	0.36	0.53	0.14	0.18	0.06	0.31	0.15	0.63	0.33	0.28	0.14
22R 17a,21b-30-homohopane	0.39	0.24	0.11	0.10	0.45	0.40	0.84	0.15	0.15	0.12	0.30	0.13	0.65	0.39	0.30	0.18
22S 17a,21b-30-bishomohopane	0.10	0.10	0.05	0.02	0.35	0.07	0.28	0.04	0.13	0.06	0.15	0.08	0.40	0.19	0.16	0.09
22R 17a,21b-30-bishomohopane	0.06	0.03	0.05	0.02	0.17	0.10	0.19	0.13	0.10	0.03	0.10	0.07	0.30	0.14	0.12	0.08
18a(H) 22,29,30 trisnorneohopane	0.29	0.16	0.11	0.10	0.37	0.29	0.37	0.11	0.12	0.06	0.27	0.13	0.31	0.24	0.14	0.07
17a(H)-22,29,30-trisnorhopane	ND		ND		0.60	0.34	0.53	0.20	0.16	0.07	0.36	0.16	0.37	0.23	0.21	0.09
18a(H)-30-Norneohopane	ND		ND		0.33	0.33	0.32	0.21	0.11	0.04	0.26	0.12	0.26	0.12	0.15	0.07
Total	3.10	1.49	1.47	0.86	7.08	3.95	6.11	2.29	2.00	0.74	3.95	1.91	5.45	2.98	2.63	1.27
<i>Sugars and sterols</i>																
Levoglucosan	19.60	15.79	10.56	13.53	23.57	4.15	10.19	7.74	17.74	18.81	11.63	9.87	2.51	3.95	1.49	1.53
Cholesterol	0.49	0.37	0.35	0.48	0.50	0.06	0.78	0.03	1.14	0.90	0.67	0.85	0.24	0.02	0.30	0.07
Stigmasterol	0.04	0.08	0.05	0.09	0.53	0.63	0.50	0.43	0.27	0.24	0.10	0.09	0.07	0.02	0.13	0.05
Total	20.13	16.25	10.96	14.10	24.60	4.84	11.47	8.21	19.15	19.94	12.39	10.81	2.82	3.99	1.92	1.66
<i>PAH</i>																
fluoranthene	0.05	0.08	0.01	0.01	0.08	0.02	0.07	0.07	0.03	0.01	0.02	0.01	0.18	0.12	0.19	0.22
acephenanthrylene	0.18	0.00	0.17	0.00	0.07	0.02	0.05	0.01	0.05	0.04	0.02	0.02	0.01	0.01	0.01	0.00
pyrene	0.05	0.08	0.02	0.03	0.07	0.03	0.04	0.03	0.02	0.02	0.00	0.00	0.11	0.06	0.09	0.10
benz(a)anthracene	0.01	0.01	0.03	0.02	1.65	0.30	0.56	0.96	0.02	0.01	0.15	0.30	0.36	0.21	0.37	0.44
Chrysene	0.06	0.07	0.02	0.02	1.70	0.44	1.95	0.44	2.07	0.44	1.48	0.52	0.66	0.35	0.72	0.97
benzofluoranthenes	0.18	0.20	0.05	0.02	1.04	0.35	0.54	0.09	0.35	0.15	0.11	0.05	1.37	0.69	0.99	1.13

Table S1 (continued)

	Spring 2011				Fall 2011				Spring 2012				Fall 2012			
	Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime	
	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD
BaP + BeP	0.06	0.09	0.01	0.01	1.12	0.38	0.70	0.14	0.85	0.39	0.48	0.16	1.31	0.78	0.82	0.70
perylene	0.03	0.02	0.01	0.01	0.08	0.03	0.08	0.03	0.08	0.03	0.43	0.27	0.05	0.02	0.05	0.04
indeno(123cd)pyrene	0.20	0.03	0.17	0.02	0.24	0.10	0.23	0.06	0.11	0.06	0.02	0.02	0.36	0.21	0.23	0.19
Benzo(ghi)perylene	0.29	0.04	0.20	0.02	0.41	0.02	0.26	0.17	0.20	0.08	0.04	0.02	0.68	0.30	0.40	0.30
dibenz(ah)anthracene	0.06	0.02	0.04	0.02	0.08	0.04	0.09	0.02	0.03	0.02	0.01	0.01	0.07	0.06	0.05	0.04
Coronene	NA		NA		0.34	0.03	0.26	0.02	0.17	0.08	0.09	0.01	0.22	0.11	0.11	0.07
Total	1.17	0.64	0.73	0.08	6.87	1.75	4.83	2.05	3.95	1.30	2.85	1.40	5.40	2.92	4.03	4.20
<i>n-alkanes</i>																
C17	ND		ND		0.79	1.37	0.64	1.10	ND		1.14	1.79	ND		ND	
C18	ND		ND		1.27	2.19	1.26	1.10	ND		0.60	0.85	ND		ND	
C19	ND		ND		0.71	0.68	1.34	0.52	ND		0.58	0.37	0.35	0.26	0.33	0.11
C20	ND		ND		1.18	1.41	1.45	0.63	ND		0.30	0.18	0.14	0.08	0.19	0.08
C21	0.19	0.15	0.50	0.27	0.93	0.64	1.57	0.48	0.09	0.14	0.37	0.14	0.14	0.10	0.18	0.09
C22	0.74	0.16	0.78	0.17	1.65	0.88	2.22	0.65	0.27	0.27	0.62	0.18	0.20	0.10	0.26	0.10
C23	1.40	0.28	1.63	0.24	2.00	0.52	3.01	0.80	1.17	0.47	1.39	0.28	0.52	0.24	0.54	0.19
C24	2.30	0.62	1.92	0.40	3.36	1.98	5.12	4.41	2.63	1.25	2.56	0.45	1.09	0.61	0.94	0.40
C25	2.47	0.74	1.95	0.35	2.35	0.61	3.38	0.53	3.25	1.52	3.77	0.64	1.34	0.57	1.22	0.49
C26	1.54	0.36	1.25	0.27	3.39	0.28	3.90	0.60	2.95	0.93	3.31	1.08	1.89	0.95	1.42	0.72
C27	2.79	1.14	2.28	1.16	3.02	0.42	4.19	0.42	3.23	0.78	3.79	1.19	2.50	1.17	1.94	0.90
C28	2.13	1.40	2.06	1.59	4.01	1.56	4.50	1.87	6.63	1.71	3.52	1.14	3.25	2.23	2.09	0.88
C29	3.22	2.00	2.59	1.27	2.68	1.05	3.23	1.58	3.43	0.40	4.05	0.67	3.15	1.76	2.92	1.58
C30	1.11	0.56	0.89	0.37	2.01	0.87	2.44	1.39	2.76	0.36	3.43	0.79	1.87	0.81	1.43	0.63
C31	1.99	1.33	1.74	1.02	2.42	0.96	2.77	1.82	2.99	0.25	3.64	0.43	2.73	1.52	2.53	1.17
C32	0.41	0.35	0.52	0.29	1.11	0.59	1.55	1.03	1.79	0.11	2.24	0.50	1.31	0.60	1.10	0.60
C33	0.57	0.52	0.57	0.39	0.45	0.77	1.03	1.29	1.29	0.22	1.60	0.45	1.30	0.71	1.16	0.51
Total	20.86	9.60	18.67	7.80	33.32	16.80	43.61	20.23	32.49	8.41	36.90	11.13	21.79	11.70	18.24	8.45
CPI	1.5	0.3	1.7	0.5	0.9	0.1	1.0	0.3	0.9	0.1	1.2	0.1	1.3	0.1	1.5	0.2

Table S1 (continued)

	Spring 2011				Fall 2011				Spring 2012				Fall 2012			
	Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime	
	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD
<i>n-Alkanoic acids</i>																
C10	NA		NA		3.39	0.77	8.98	6.31	3.60	1.65	3.66	1.29	0.66	0.35	1.12	0.74
C11	NA		NA		1.53	0.32	4.04	3.11	4.87	7.91	3.64	4.32	5.38	4.37	3.82	4.14
C12	NA		NA		23.44	7.01	31.74	10.25	7.08	2.77	18.00	8.28	3.15	2.21	4.55	2.32
C13	NA		NA		13.29	15.61	3.90	1.58	2.69	1.14	3.44	1.70	1.14	0.60	1.30	0.34
C14	NA		NA		28.26	13.17	25.16	11.95	26.99	17.84	33.27	11.62	11.77	6.34	14.03	3.38
C15	NA		NA		7.76	2.84	6.98	3.09	17.89	9.74	11.68	5.47	6.09	2.33	5.59	1.49
C16	NA		NA		37.79	4.02	34.35	11.16	57.78	4.83	36.68	5.94	40.07	13.38	30.16	9.28
C17	NA		NA		3.62	0.58	4.90	4.17	11.98	9.00	5.02	1.08	2.84	0.93	2.73	0.69
C18	NA		NA		33.90	3.76	31.32	8.51	48.95	7.43	29.51	4.16	23.87	6.27	17.99	4.78
C19	NA		NA		0.10	0.03	0.18	0.17	0.50	0.22	0.40	0.11	0.13	0.09	0.06	0.03
C20	NA		NA		3.59	0.46	4.49	3.32	13.32	6.58	8.23	1.66	2.99	1.39	2.36	1.24
C21	NA		NA		5.47	2.75	5.83	2.84	10.28	2.62	5.71	1.47	3.87	1.22	2.94	1.11
C22	NA		NA		16.98	3.13	19.48	4.33	21.04	5.09	14.18	2.98	11.80	3.24	10.11	3.79
C23	NA		NA		8.85	2.75	9.91	3.45	10.29	2.65	8.31	2.27	4.53	1.20	3.99	1.37
C24	NA		NA		23.78	4.84	32.50	8.91	30.82	6.50	25.03	5.33	15.73	6.63	14.94	4.29
C25	NA		NA		8.44	1.61	9.60	2.35	12.07	3.30	7.08	2.02	4.48	1.64	3.54	1.00
C26	NA		NA		23.58	4.67	33.53	7.89	32.08	16.83	27.34	5.06	13.54	6.11	13.73	4.75
C27	NA		NA		4.81	1.68	6.80	2.32	6.78	1.17	5.64	1.98	2.81	0.61	2.41	0.93
C28	NA		NA		22.21	5.28	27.49	0.85	24.20	6.51	27.92	5.79	16.75	7.31	18.60	8.40
C29	NA		NA		4.33	1.03	5.11	1.61	6.77	1.56	5.57	2.03	2.37	1.20	2.27	0.74
C30	NA		NA		20.33	6.00	26.18	2.01	19.50	4.63	30.51	10.54	15.90	9.73	15.42	6.86
C31	NA		NA		2.22	0.83	2.44	0.58	4.09	1.87	3.48	1.74	1.11	0.57	1.00	0.91
C32	NA		NA		11.56	4.36	17.39	5.53	20.71	12.37	20.93	12.76	6.79	3.91	5.64	2.79
Total					309	87.49	352	106	394	134	335	99.62	198	81.63	178	65.34
CPI					4.3	1.0	5.0	0.4	3.6	0.6	4.7	0.8	4.7	0.3	5.3	1.1

Table S1 (continued)

	Spring 2011				Fall 2011				Spring 2012				Fall 2012			
	Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime		Daytime		Nighttime	
	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD
<i>n-Alkenoic acids</i>																
cis-9-Octadecenoic acid	NA		NA		3.83	1.83	4.77	3.52	15.38	8.44	8.50	2.72	1.22	1.83	0.94	0.39
trans-9-Octadecenoic acid	NA		NA		7.57	2.85	8.81	2.76	12.74	7.51	13.35	4.97	2.11	2.04	2.45	0.87
Total					11.40	4.67	13.57	6.28	28.12	15.95	21.85	7.69	3.33	3.87	3.40	1.27
Octadecanoic acid/cis-9-octadecenoic acid					10.6	5.9	8.2	3.6	5.0	3.4	3.8	1.3	20.3	17.1	21.0	6.7
<i>Biomass burning tracers</i>																
Abietic acid	NA		NA		5.19	2.54	6.20	2.87	13.60	6.60	9.86	2.17	5.17	1.41	3.23	0.92
Dehydroabietic acid	NA		NA		2.89	1.82	3.69	0.99	1.94	0.63	4.39	0.74	2.02	1.10	1.95	0.74
7-Oxo-dehydroabietic acid	NA		NA		0.28	0.11	0.31	0.15	0.41	0.35	0.25	0.13	0.35	0.16	0.32	0.20
Pimaric acid	NA		NA		0.23	0.05	0.35	0.13	0.00	0.00	0.09	0.13	0.15	0.09	0.26	0.23
Isopimaric acid	NA		NA		0.08	0.03	0.12	0.05	0.00	0.00	0.03	0.06	0.07	0.03	0.06	0.02
9,10-Epoxyoctadecanoic acid	NA		NA		1.25	1.35	1.78	1.54	4.96	2.16	1.19	0.72	1.59	0.85	1.31	0.81
Guaiacol	NA		NA		ND		ND		ND		ND		3.04	2.59	4.61	4.42
Vanillin	NA		NA		ND		ND		ND		ND		18.58	19.13	9.41	3.18
Retene	NA		NA		ND		ND		ND		ND		0.01	0.01	0.01	0.01
Total					9.92	5.90	12.46	5.74	21.36	9.75	15.80	3.95	30.97	25.37	21.15	10.54
<i>Secondary biogenic tracers</i>																
Pinic acid	NA		NA		0.00	0.00	0.00	0.00	4.61	7.31	1.90	4.25	0.49	0.75	0.30	0.10
cis-Pinonic acid	NA		NA		5.13	1.23	2.28	0.62	6.83	2.09	5.53	1.54	2.35	1.30	2.29	1.59
Total					5.13	1.23	2.28	0.62	11.44	9.40	7.43	5.79	2.84	2.05	2.59	1.69
Identified OC	45.27	27.98	31.83	22.83	408	127	447	152	512	200	436	142	270	135	232	94.42
OC	9200	800	7300	700	8800	500	5800	300	6700	400	4000	300	10200	600	7100	400
EC	1300	400	600	300	900	100	700	100	500	100	10	100	900	100	700	100
PM _{2.5}	21300	3400	27900	3300	19400	2800	14000	1400	15800	2200	13700	1800	20100	3000	16000	1800

ND: Not Detected; NA: Not Available.

Table S2. Concentrations of organic compounds in MMA (PM_{2.5}) in ng m⁻³

Sample				% Mass	Chi-squared	r ²	Gasoline-powered vehicles	Vegetative detritus	Diesel-powered vehicles	Meat-cooking operations	Natural gas combustion	Biomass burning	Fuel oil combustion
spring 2011	1	Weekend	Daytime	75.5	6.72	0.72	2.61±0.69	0.55±0.09	14.75±1.63	11.83±2.15	0.02±0.01	0.36±0.09	*
	2	Weekend	Nighttime	41.3	5.39	0.71	2.66±0.64	0.32±0.05	5.22±0.70	15.39±2.45	*	0.22±0.06	*
	3	Weekday	Nighttime	40.8	4.25	0.76	2.44±0.49	0.44±0.06	3.91±0.56	8.89±1.55	*	0.15±0.04	*
	4	Weekday	Daytime	89.9	3.54	0.81	2.05±0.45	0.21±0.03	4.17±0.63	7.27±1.33	0.00±0.00	0.15±0.04	*
	5	Weekday	Nighttime	82	2.31	0.85	2.13±0.47	0.06±0.01	2.35±0.41	9.10±1.54	*	0.15±0.04	*
	6	Weekend	Daytime	79.9	8.38	0.62	3.29±0.51	0.14±0.02	7.20±0.76	*	*	*	*
	7	Weekend	Nighttime	35.7	6.82	0.67	2.62±0.40	0.22±0.03	4.74±0.57	*	*	*	*
	8	Weekend	Daytime	42.9	8.3	0.59	2.37±0.37	0.15±0.02	3.66±0.48	*	*	*	*
	9	Weekend	Nighttime	34.9	7.3	0.58	2.87±0.43	0.11±0.02	2.74±0.41	*	*	*	*
	10	Weekday	Daytime	104.8	3.05	0.85	2.74±0.56	0.10±0.02	7.69±0.85	7.12±1.36	0.00±0.00	0.16±0.04	*
	11	Weekend	Daytime	93.9	2.97	0.82	1.15±0.80	0.16±0.03	6.56±0.84	6.74±1.31	*	0.13±0.04	*
	12	Weekend	Nighttime	22.8	6.46	0.64	2.03±0.33	0.19±0.03	3.93±0.51	*	*	*	*
fall 2011	13	Weekday	Daytime	160.5	8.43	0.65	3.78±0.86	0.01±0.01	18.60±2.12	2.77±0.71	0.07±0.04	0.16±0.04	4.28±3.41
	14	Weekday	Daytime	95.9	7.26	0.66	2.87±0.61	0.01±0.01	10.47±1.17	3.81±0.64	0.05±0.01	0.14±0.04	*
	15	Weekday	Nighttime	130.7	6.7	0.69	3.48±0.67	0.18±0.03	9.72±1.21	4.22±0.69	0.03±0.01	0.01±0.00	*
	16	Weekday	Nighttime	169.6	7.17	0.66	2.76±0.60	0.01±0.01	12.71±1.43	2.98±0.62	*	0.10±0.03	3.32±1.22
	17	Weekend	Daytime	116.6	6.33	0.74	4.44±0.88	0.38±0.06	11.92±1.49	3.20±0.78	0.04±0.03	0.20±0.06	4.07±3.69
	18	Weekend	Nighttime	174.6	5.49	0.73	0.49±0.24	0.63±0.10	16.86±2.01	4.39±0.82	*	0.11±0.03	3.89±1.18
spring 2012	19	Weekday	Daytime	87.5	7.89	0.63	1.07±0.39	0.38±0.06	2.79±0.39	10.65±1.28	0.02±0.01	0.06±0.02	*
	20	Weekday	Daytime	73.1	7.18	0.67	1.64±0.42	0.46±0.07	2.46±0.35	9.47±1.16	0.01±0.01	0.08±0.02	*
	21	Weekday	Daytime	100.4	7.79	0.65	1.61±0.40	0.44±0.07	2.49±0.36	7.98±1.00	0.01±0.01	0.11±0.03	*
	22	Weekend	Daytime	103.1	5.05	0.75	1.56±0.46	0.32±0.05	5.18±0.69	11.46±1.42	0.01±0.01	0.43±0.11	*
	23	Weekend	Daytime	118.4	6.84	0.66	1.28±0.37	0.40±0.06	1.72±0.28	9.14±1.14	0.01±0.00	0.13±0.03	*

* Source profile not included in the CMB run.

Table S2 (*continued*)

fall 2012	24	Weekend	Daytime	175	6.39	0.74	5.24±1.03	0.69±0.11	18.55±1.96	3.10±0.56	0.05±0.01	0.01±0.00	*
	25	Weekend	Nighttime	128.5	4.94	0.76	2.65	0.46	5.81	2.46	0.04	0.00	*
	26	Weekday	Daytime	145.7	7.5	0.72	9.15	0.34	12.94	3.06	0.15	0.00	*
	27	Weekday	Daytime	166.1	8.56	0.7	11.17	0.38	14.37	3.18	0.12	0.00	*
	28	Weekday	Nighttime	152.9	6.32	0.76	6.93	0.55	8.36	4.58	0.08	0.00	*
	29	Weekend	Nighttime	42.7	8.85	0.69	2.37	0.18	3.38	3.88	0.02	0.02	*
	30	Weekday	Daytime	75.7	7.39	0.73	4.48	0.24	9.56	3.52	0.06	0.01	*
	31	Weekday	Nighttime	68	6.9	0.75	1.91	0.17	4.13	2.86	0.02	0.00	0.22
	32	Weekday	Nighttime	87.9	7.63	0.72	2.10	0.21	4.07	3.07	0.02	0.01	*

* Source profile not included in the CMB run.