

Supplementary

Characteristics of Carbonaceous Matter in Aerosol from Selected Urban and Rural Areas of Southern Poland

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Table S1. Average concentrations of nine carbon fractions ($\mu\text{g}\cdot\text{m}^{-3}$) at considered rural background sites.

Specification	Krynica	Rokitno	Racibórz-S	Złoty Potok
All period				
OC1	0.82 ± 0.81	1.24 ± 1.18	1.63 ± 1.93	0.54 ± 0.41
OC2	1.28 ± 0.85	1.65 ± 1.30	1.94 ± 2.17	2.24 ± 1.42
OC3	0.93 ± 0.41	1.10 ± 0.56	1.02 ± 0.92	1.24 ± 0.80
OC4	1.09 ± 0.37	1.25 ± 0.53	1.08 ± 0.59	2.83 ± 1.71
PC	2.39 ± 2.59	2.65 ± 2.94	3.29 ± 4.70	1.73 ± 3.17
EC1	0.61 ± 0.66	0.78 ± 0.84	0.79 ± 0.97	0.26 ± 0.44
EC2	1.14 ± 1.16	1.49 ± 1.48	1.61 ± 1.89	1.21 ± 1.69
EC3	1.39 ± 1.46	1.47 ± 1.47	1.99 ± 3.06	1.60 ± 2.22
EC4	0.19 ± 0.07	0.19 ± 0.10	0.14 ± 0.07	0.13 ± 0.05
Heating season				
OC1	1.21 ± 1.01	1.84 ± 1.39	2.45 ± 2.50	0.82 ± 0.43
OC2	1.58 ± 1.09	2.30 ± 1.52	2.82 ± 2.82	3.03 ± 1.62
OC3	0.99 ± 0.52	1.29 ± 0.68	1.38 ± 1.19	1.60 ± 0.99
OC4	1.16 ± 0.44	1.33 ± 0.63	1.21 ± 0.73	4.12 ± 1.48
PC	3.91 ± 2.96	4.19 ± 3.41	5.30 ± 6.01	3.11 ± 4.03
EC1	1.00 ± 0.75	1.25 ± 0.95	1.29 ± 1.16	0.48 ± 0.54
EC2	1.88 ± 1.26	2.36 ± 1.60	2.56 ± 2.26	2.14 ± 2.00
EC3	2.22 ± 1.71	2.13 ± 1.77	3.12 ± 4.05	2.55 ± 2.84
EC4	0.19 ± 0.08	0.20 ± 0.11	0.14 ± 0.08	0.12 ± 0.04
Non-heating season				
OC1	0.44 ± 0.15	0.62 ± 0.33	0.89 ± 0.51	0.27 ± 0.08
OC2	0.99 ± 0.30	0.99 ± 0.39	1.12 ± 0.59	1.45 ± 0.42
OC3	0.87 ± 0.23	0.90 ± 0.28	0.68 ± 0.33	0.89 ± 0.25
OC4	1.03 ± 0.28	1.18 ± 0.40	0.96 ± 0.39	1.53 ± 0.52
PC	0.91 ± 0.52	1.06 ± 0.79	1.43 ± 1.49	0.35 ± 0.22
EC1	0.23 ± 0.18	0.30 ± 0.23	0.33 ± 0.37	0.05 ± 0.03
EC2	0.42 ± 0.23	0.59 ± 0.42	0.74 ± 0.77	0.28 ± 0.13
EC3	0.59 ± 0.24	0.78 ± 0.47	0.95 ± 0.89	0.66 ± 0.24
EC4	0.18 ± 0.05	0.18 ± 0.08	0.14 ± 0.06	0.15 ± 0.05

Table S2. Average concentrations of nine carbon fractions ($\mu\text{g}\cdot\text{m}^{-3}$) at considered rural background sites.

Specification	Skawina	Zabrze-PM ₁₀	Trzebinia	Racibórz-C	Zabrze-PM _{2.5}	Zabrze-PM ₁
All period						
OC1	1.43 ± 1.30	2.43 ± 3.00	0.56 ± 0.60	1.85 ± 1.67	2.17 ± 2.25	0.95 ± 1.03
OC2	2.66 ± 2.65	3.38 ± 4.14	2.30 ± 1.96	2.15 ± 2.21	2.88 ± 3.06	1.05 ± 0.90
OC3	1.86 ± 1.04	1.66 ± 1.21	1.29 ± 0.68	1.19 ± 0.97	1.34 ± 1.05	0.60 ± 0.38
OC4	1.72 ± 0.95	1.57 ± 1.01	3.34 ± 2.11	1.2 ± 0.72	1.45 ± 0.86	0.97 ± 0.85
PC	4.42 ± 5.36	6.53 ± 8.93	1.11 ± 1.85	4.15 ± 5.54	5.34 ± 6.98	1.03 ± 1.27
EC1	1.77 ± 2.32	1.64 ± 2.07	0.30 ± 0.50	1.05 ± 1.33	1.07 ± 1.26	0.25 ± 0.27
EC2	2.96 ± 3.54	3.13 ± 4.07	1.36 ± 1.85	2.12 ± 2.53	2.36 ± 2.54	0.69 ± 0.80
EC3	1.88 ± 1.15	4.10 ± 5.15	1.48 ± 1.48	2.40 ± 2.96	4.10 ± 5.24	1.00 ± 1.11
EC4	0.24 ± 0.17	0.28 ± 0.17	0.19 ± 0.22	0.20 ± 0.08	0.20 ± 0.13	0.14 ± 0.07
Heating season						
OC1	2.24 ± 1.57	4.81 ± 3.42	1.22 ± 0.49	2.59 ± 2.06	4.01 ± 2.21	1.94 ± 1.44
OC2	4.19 ± 3.39	6.14 ± 5.24	4.20 ± 1.97	3.24 ± 2.67	5.03 ± 3.44	1.79 ± 1.34
OC3	2.28 ± 1.33	2.33 ± 1.58	1.86 ± 0.70	1.66 ± 1.17	2.00 ± 1.23	0.87 ± 0.57
OC4	1.72 ± 0.80	2.09 ± 1.22	5.60 ± 1.68	1.45 ± 0.86	2.06 ± 0.83	1.79 ± 1.15
PC	7.71 ± 6.78	13.49 ± 10.27	2.50 ± 2.44	6.90 ± 6.65	10.54 ± 7.54	2.23 ± 1.72
EC1	3.15 ± 2.99	3.20 ± 2.39	0.68 ± 0.66	1.78 ± 1.55	1.96 ± 1.37	0.45 ± 0.35
EC2	5.23 ± 4.37	6.11 ± 4.83	2.99 ± 2.18	3.49 ± 2.91	4.34 ± 2.55	1.41 ± 1.05
EC3	2.42 ± 1.29	8.12 ± 5.91	2.58 ± 1.93	3.70 ± 3.66	7.98 ± 5.70	2.18 ± 1.37
EC4	0.20 ± 0.09	0.37 ± 0.20	0.22 ± 0.35	0.19 ± 0.10	0.23 ± 0.16	0.16 ± 0.08
Non-heating season						
OC1	0.82 ± 0.46	0.72 ± 0.35	0.16 ± 0.09	1.10 ± 0.44	0.64 ± 0.25	1.10 ± 0.44
OC2	1.49 ± 0.71	1.39 ± 0.64	1.15 ± 0.52	1.04 ± 0.49	1.09 ± 0.44	1.04 ± 0.49
OC3	1.53 ± 0.57	1.17 ± 0.38	0.94 ± 0.33	0.72 ± 0.29	0.79 ± 0.33	0.72 ± 0.29
OC4	1.71 ± 1.06	1.20 ± 0.61	1.96 ± 0.65	1.09 ± 0.49	0.94 ± 0.46	1.09 ± 0.49
PC	1.91 ± 1.04	1.53 ± 1.21	0.27 ± 0.22	1.38 ± 1.35	1.00 ± 0.80	1.38 ± 1.35
EC1	0.72 ± 0.43	0.52 ± 0.49	0.06 ± 0.04	0.31 ± 0.28	0.32 ± 0.33	0.31 ± 0.28
EC2	1.22 ± 0.71	0.98 ± 0.86	0.36 ± 0.16	0.73 ± 0.68	0.70 ± 0.65	0.73 ± 0.68
EC3	1.47 ± 0.82	1.21 ± 0.78	0.82 ± 0.29	1.08 ± 0.86	0.85 ± 0.46	1.08 ± 0.86
EC4	0.27 ± 0.21	0.22 ± 0.11	0.17 ± 0.05	0.21 ± 0.06	0.17 ± 0.08	0.21 ± 0.06



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