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Supplement of

Emission factors for PM₁₀ and polycyclic aromatic hydrocarbons (PAHs) from illegal burning of different types of municipal waste in households

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Supplementary material

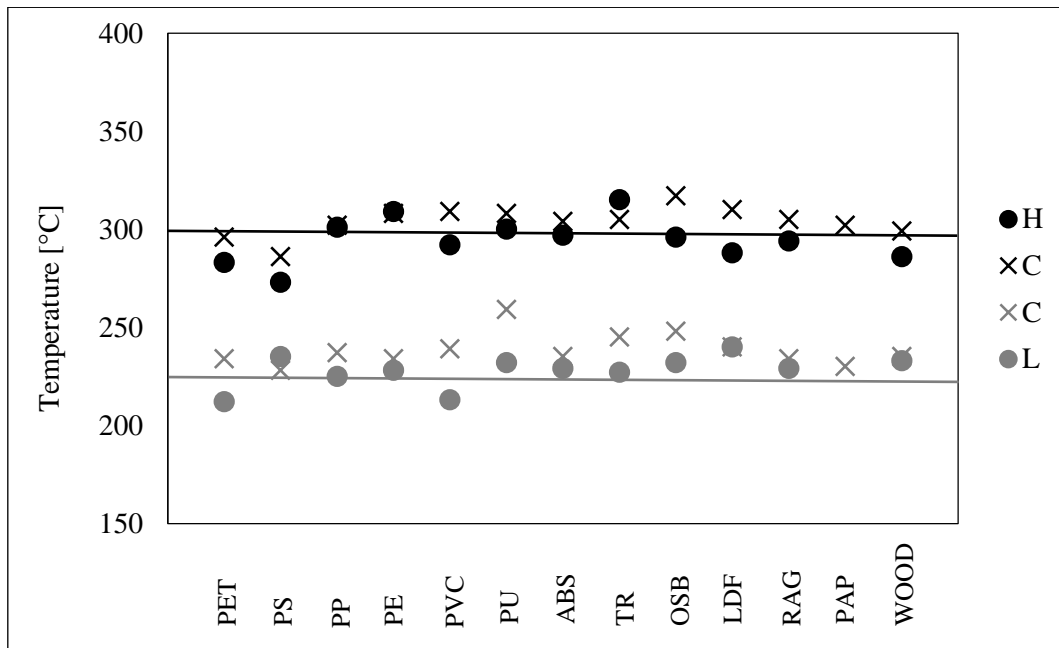


Figure S1. The mean temperature values of the flue gas for combustion tests (H: high, C: combined, L: low excess of air supply).

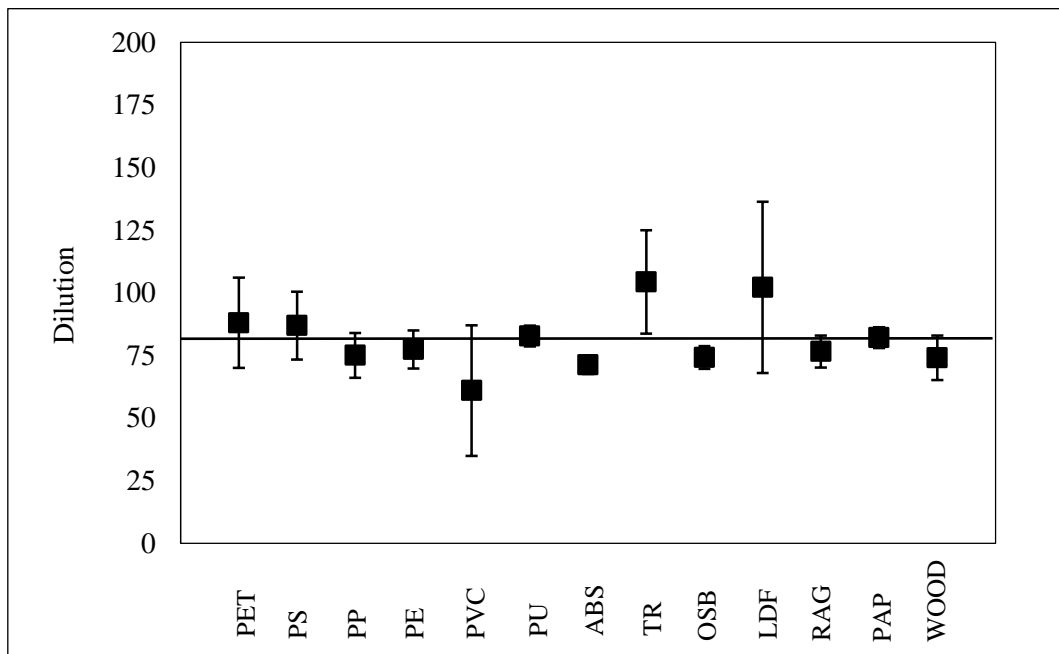


Figure S2. The dilution ratios in the controlled experimental system (error bars: SD).

Table S1. Fundamental parameters of waste combustion tests.

Sample type-code	Mass of sample specimen [g]	Air supply settings	Number of test burns		Total mass of PM ₁₀ on filter [mg]
			H	L	
PET-F50	135.9	H	4		15.3
PET-F3	154.8	C	2	2	20.9
PET-F51	148.7	L		4	15.0
PET-F4	149.5	L		4	23.8
PS-F52	28.7	H	4		15.7
PS-F6	40.8	H	4		24.1
PS-F53	28.1	C	2	2	15.7
PS-F10*	16.3	C	1	1	15.4
PS-F8	28.0	C	2	2	13.3
PS-F9	28.1	L		4	15.5
PP-F54	46.1	H	4		15.6
PP-F57	60.4	C	2	2	15.9
PP-F18	28.5	L		4	21.5
PE-F20	43.3	H	3		16.0
PE-F56	47.1	C	2	2	11.4
PE-F23	41.6	L		3	5.4
PVC-F80	39.7	H	3		24.1
PVC-F81	38.1	C	1	1	21.3
PVC-F28	30.7	L		2	20.5
PU-F29	41.6	H	4		14.8
PU-F30	56.2	C	2	2	16.7
PU-F32	43.6	L		4	6.5
ABS-F63	25.0	H	2		36.2
ABS-F64	26.7	C	1	1	28.1
ABS-F66	24.6	L		2	37.2
TR-F34	41.3	H	2		12.6
TR-F35	38.0	C	1	1	10.2
TR-F37	37.2	L		2	16.6
OSB-F38	105.0	H	4		8.3
OSB-F40	219.5	C	2	2	17.3
OSB-F41	228.1	L		4	12.0
LDF-F43	328.9	H	2		19.0
LDF-F47	371.9	C	1	1	10.1
LDF-F48	407.0	C	1	1	15.3
LDF-F44	374.5	C	1	1	9.2
LDF-F46	367.9	L		2	6.2
RAG-F58	102.5	H	5		10.9
RAG-F59	88.4	C	2	2	11.0
RAG-F61	102.6	L		5	11.5
PAP-F68	409.1	C	5	5	10.3
PAP-F70	436.5	C	5	5	12.6
WOOD-F71	220.8	H	4		9.3
WOOD-F72	508.8	H	4		14.0
WOOD-F76	624.5	C	2	2	14.9
WOOD-F78	405.1	C	2	2	14.9
WOOD-F74	219.1	L		2	4.1
WOOD-F77	411.7	L		4	9.5

H: high, C: combined, L: low excess of air supply; *foam

Table S2. Emission factors for individual PAHs ($\mu\text{g g}^{-1}$ fuel).

		Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Indeno(1,2,3-cd)pyrene
PET	Mean	1.4	0.24	8.3	5.6	3.7	3.8	4.7	0.72	1.1	0.19	1.4	1.1
	SD	0.46	0.09	3.1	1.5	1.6	2.1	3.3	0.46	0.72	0.11	1.1	0.9
PS	Mean	3.9	0.41	34	27	17	21	14	3.1	6.6	1.1	5.4	1.7
	SD	1.6	0.24	39	34	9.3	13	6.2	1.4	3.2	0.33	2.8	1
PP	Mean	0.45	0.27	11	21	15	9.9	5.4	3.6	12	1	12	6.4
	SD	0.61	0.28	6.9	9.2	4	2	1.6	1.1	3.8	0.88	4	2.3
PE	Mean	0.59	0.15	7.6	10	3.5	3.2	0.89	0.53	1.1	0.27	1.1	1.2
	SD	0.4	0.0072	1	1.8	3.3	2.1	0.0041	0.022	0.13	0.018	0.5	0.15
PVC	Mean	2.8	0.59	7.4	8.4	11	9.5	3.5	1.4	3.4	0.59	2.6	1.6
	SD	1.5	0.21	2.4	0.91	3.4	3.3	1.7	0.69	1.2	0.7	1.2	1.2
PU	Mean	10	3.1	15	22	2.3	1.6	1.2	0.75	2.8	0.3	3.1	1.2
	SD	8.4	2.4	4.6	10	0.86	0.31	0.35	0.02	0.072	0.081	0.81	0.28
TR	Mean	1.2	0.28	6.6	6	2.4	2.1	1.1	0.69	1.4	0.1	1.1	1.6
	SD	1	0.2	0.93	1.4	2	1.6	0.78	0.52	1.3	0.09	0.93	1.3
OSB	Mean	0.4	0.061	0.71	0.7	0.16	0.12	0.1	0.051	0.089	0.034	0.076	0.19
	SD	0.6	0.087	0.65	0.36	0.09	0.068	0.058	0.036	0.072	0.031	0.1	0.13
LDF	Mean	0.021	0.0045	0.45	0.5	0.23	0.23	0.13	0.057	0.1	0.036	0.11	0.099
	SD	0.026	0.009	0.27	0.27	0.16	0.2	0.1	0.036	0.085	0.01	0.062	0.1
RAG	Mean	0.2	0.06	3.4	3.8	2.4	2.1	2.9	0.81	1.6	0.34	2.1	1.5
	SD	0.2	0.07	3.1	3.2	1.7	1.5	2.2	0.66	1.4	0.35	1.8	1.4
ABS	Mean	34	5.1	60	44	30	37	14	5.2	13	0.93	6.3	6.1
	SD	19	2.5	25	18	13	14	7.7	3.3	9	0.63	4.5	4.6
PAP	Mean	0.012	0.0061	0.14	0.14	0.15	0.18	0.13	0.066	0.11	0.014	0.12	0.078
	SD	0.015	0.009	0.11	0.055	0.11	0.13	0.1	0.052	0.087	0.006	0.1	0.056
WOOD	Mean	0.077	0.0093	0.077	0.14	0.012	0.014	0.0035	0.0023	0.0022	0.00035	0.0023	0.00074
	SD	0.099	0.0089	0.053	0.047	0.015	0.015	0.004	0.0021	0.0032	0.0006	0.0035	0.0014