

Emissions from the Open Laboratory Combustion of Cheatgrass (*Bromus Tectorum*)

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Table S1. EFs of polar organic compounds in particle- (filter) and gas- (XAD) phase emissions from cheatgrass; units: $\mu\text{g/g}$ of consumed fuel; the standard deviation was on average 25% and it represents analytical uncertainty.

Name	Particle Phase (Filter) ($\mu\text{g/g}$)	Gas Phase, XAD ($\mu\text{g/g}$)
Alkanoic Acid		
hexanoic acid	0.00	0.92
heptanoic acid	0.00	0.48
octanoic acid	0.00	1.11
nonanoic acid	0.00	0.31
decanoic acid	0.00	0.15
undecanoic acid	0.31	0.02
dodecanoic (lauric) acid	0.18	0.25
tridecanoic acid	0.01	0.01
myristic acid	0.49	0.04
heptadecanoic acid	0.09	0.00
pentadecanoic acid	0.17	0.01
palmitic acid	4.98	0.50
isostearic acid	0.07	0.00
stearic acid	0.66	0.33
nonadecanoic acid	0.05	0.00
eicosanoic acid	0.53	0.03
heneicosanoic acid	0.08	0.01
docosanoic acid	0.29	0.03
tricosanoic acid	0.12	0.00
tetracosanoic acid	0.05	0.01
Total	8.08	4.20
Alkenoic Acid		
traumatic acid	0.08	0.00
myristoleic acid	0.01	0.00
palmitoleic acid	0.09	0.01
elaidic acid	0.61	0.00
oleic acid	1.46	0.00
Total	2.26	0.02

Alkanedioic Acid		
me-malonic	0.00	0.00
maleic acid	0.03	0.90
succinic acid	1.74	0.73
me-succinic acid	0.58	0.36
glutaric acid	0.38	0.17
2-methylglutaric acid	0.05	0.00
3-methylglutaric acid	0.00	0.00
hexanedioic (adipic) acid	0.05	0.06
heptanedioic (pimelic) acid	0.00	0.07
3-methyladipic acid	0.13	0.00
suberic acid	22.9	0.03
azelaic acid	0.27	0.00
sebacic acid	0.01	0.00
1,11-undecanedicarboxylic acid	0.02	0.00
1,12-dodecanedicarboxylic acid	0.05	0.00
Total	26.2	2.3
Benzoic Acid and Substituted Benzoic Acid		
benzoic acid	0.15	1.30
salicylic acid	0.36	0.04
o-toluic	0.01	0.07
m-toluic	0.04	0.23
p-toluic	0.01	0.08
2,4-dimethylbenzoic acid	0.01	0.26
2,5-dimethylbenzoic acid	0.02	0.06
2,6-dimethylbenzoic acid	0.01	0.06
3,4-dimethylbenzoic acid	0.03	0.01
Total	0.63	2.11
Aromatic Dicarboxylic Acids		
isophthalic acid	0.10	0.11
phthalic acid	0.14	0.01
Total	0.24	0.12
Anhydro Sugars		
levoglucosan	95.96	1.02
mannosan	2.37	0.02
Total	98.3	1.0
Methoxyphenols		
guaiacol	0.01	17.63
4-me-guaiacol	0.00	4.95
4-formyl-guaiacol (vanillin)	1.10	2.04
syringol	1.23	14.81
4-ethyl-guaiacol	0.01	4.21
acetovanillone	0.69	0.49
4-methyl-syringol	0.87	1.85
syringaldehyde	2.67	0.25
4-allyl-guaiacol (eugenol)	0.00	0.78
isoeugenol	0.28	4.73

Total	6.87	51.74
Methoxy Acids		
vanillic acid	1.15	0.06
2,3-dimethoxybenzoic acid	0.01	0.02
2,4-dimethoxybenzoic acid	0.00	0.01
2,5-dimethoxybenzoic acid	0.00	0.00
2,6-dimethoxybenzoic acid	0.00	0.00
3,4-dimethoxybenzoic acid	0.03	0.00
3,5-dimethoxybenzoic acid	0.04	0.02
homovanillic acid	0.13	0.00
syringic acid	1.01	0.01
Total	2.39	0.12
Resin Acids		
dehydroabietic acid	0.054	0.003
pimaric acid	0.050	0.000
sandaracopimaric acid	0.012	0.004
abietic acid	0.050	0.001
isopimaric acid	0.002	0.000
7-oxodehydroabietic acid	0.002	0.002
8,15-Pimaradien-18-oic acid	0.005	0.001
Total	0.174	0.012
Other Compounds		
cholesterol	0.01	0.00
cis-pinonic acid	0.00	0.01
β -sitosterol	3.16	0.00