Supplement for

Chemical composition and light absorption of carbonaceous aerosols emitted from crop residue burning: Influence of combustion efficiency

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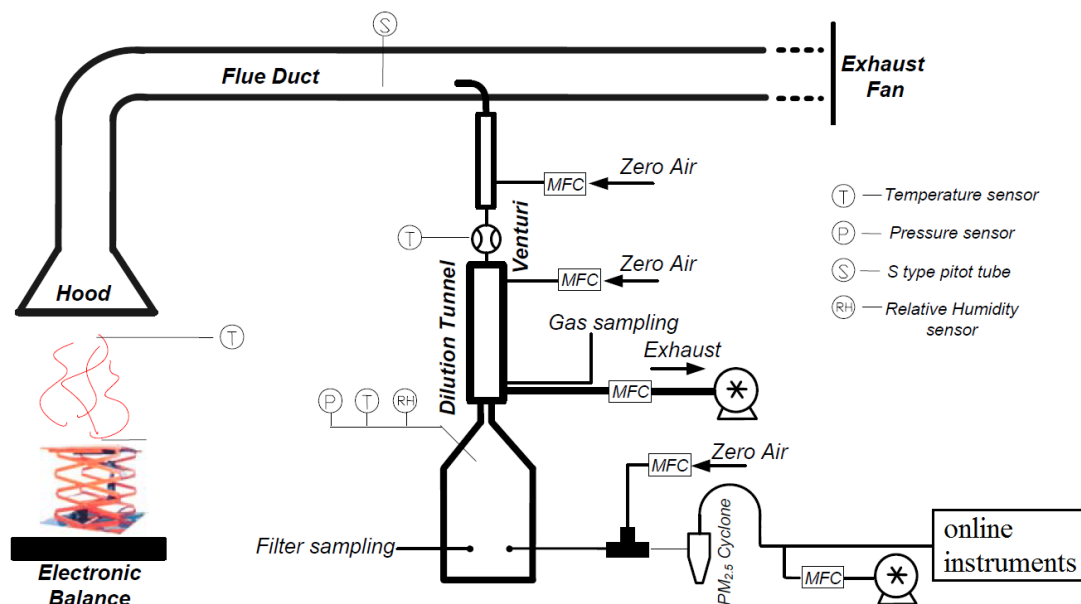
Figure S1 Scheme of the biomass burning simulation system (He et al., 2010).

Table S1 Burning conditions, including biofuel types, moisture contents and modified combustion efficiency (MCE), of simulated biomass burning experiments in this study

Types of biomass fuels	Moisture content		MCE
Corn	low level	13%	0.83
		13%	0.82
		13%	0.82
	high level	18%	0.80
		18%	0.80
		18%	0.75
Wheat	low level	7%	0.77
		7%	0.79
		7%	0.79
		9%	0.83
		9%	0.79
		9%	/
	medium level	18%	0.76
		18%	0.82
		18%	0.82
		22%	0.81
		22%	0.77
		22%	0.76
	high level	27%	0.77
		27%	0.74
		27%	0.69
		33%	0.69
		33%	0.68
		33%	0.72
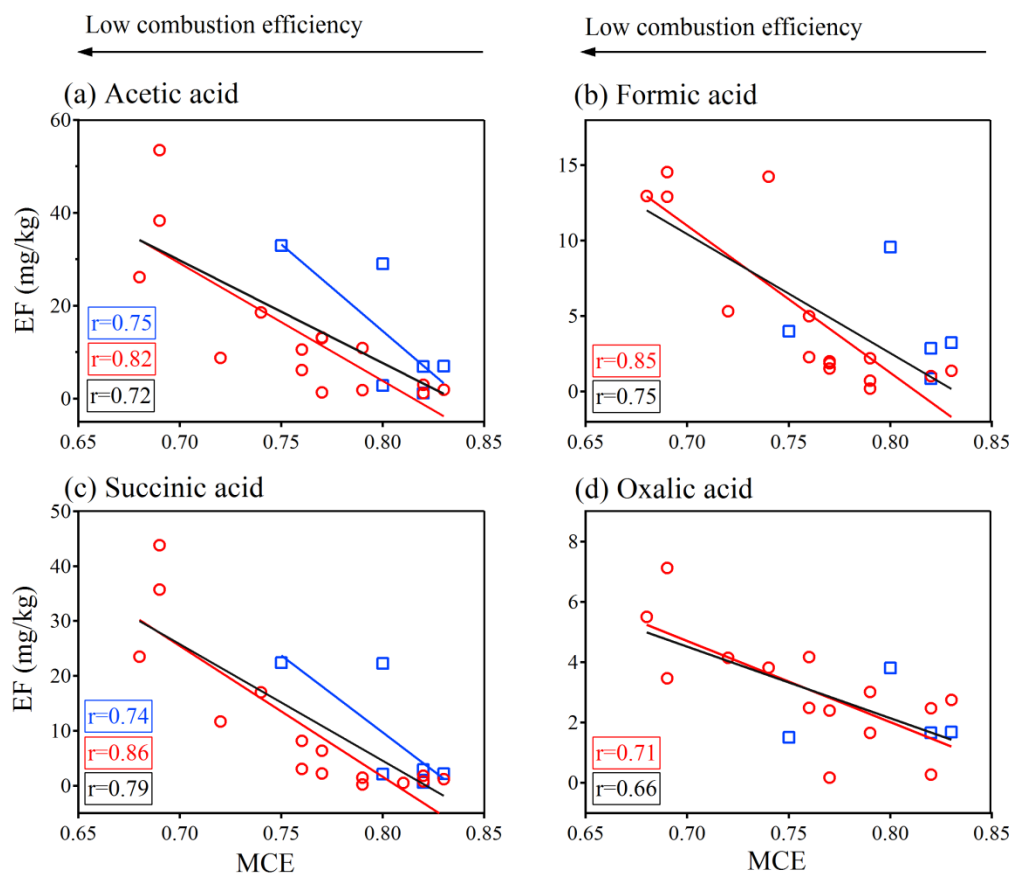
Figure S2 Emission factors of low molecular weight organic acids (acetic acid, formic acid, succinic acid, and oxalic acid) as a function of combustion efficiency. Corn and wheat burning emissions are denoted by red and blue color, respectively. The r values in each panel are the correlation coefficients between emission factors and MCE for corn (blue), wheat (red) and overall (black) burning experiments.

References

He, L. Y., Lin, Y., Huang, X. F., Guo, S., Xue, L., Su, Q., Hu, M., Luan, S. J., and Zhang, Y. H.: Characterization of high-resolution aerosol mass spectra of primary organic aerosol emissions from Chinese cooking and biomass burning, Atmos. Chem. Phys., 10, 11535-11543, 10.5194/acp-10-11535-2010, 2010.