1   Supplementary for

2   **On the use of reference mass spectra for reducing uncertainty in source apportionment of solid**

3   **fuel burning in ambient organic aerosol**

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19   This document includes four supplementary figures:

20   Figure S1. Relative difference at each m/z for the mass spectral profile of wood, peat, and smoky coal

21   burning.

22   Figure S2. Relative difference at each m/z for the mass spectral profile of biomass briquettes and

23   smokeless coal burning.

24   Figure S3. Scatter plot between OA and temperature (left panel); and wind speed (right panel), color-

25   coded by date.

26   Figure S4. Mass spectra (left axis) of the OA factors of peat, wood, coal, HOA, and OOA.

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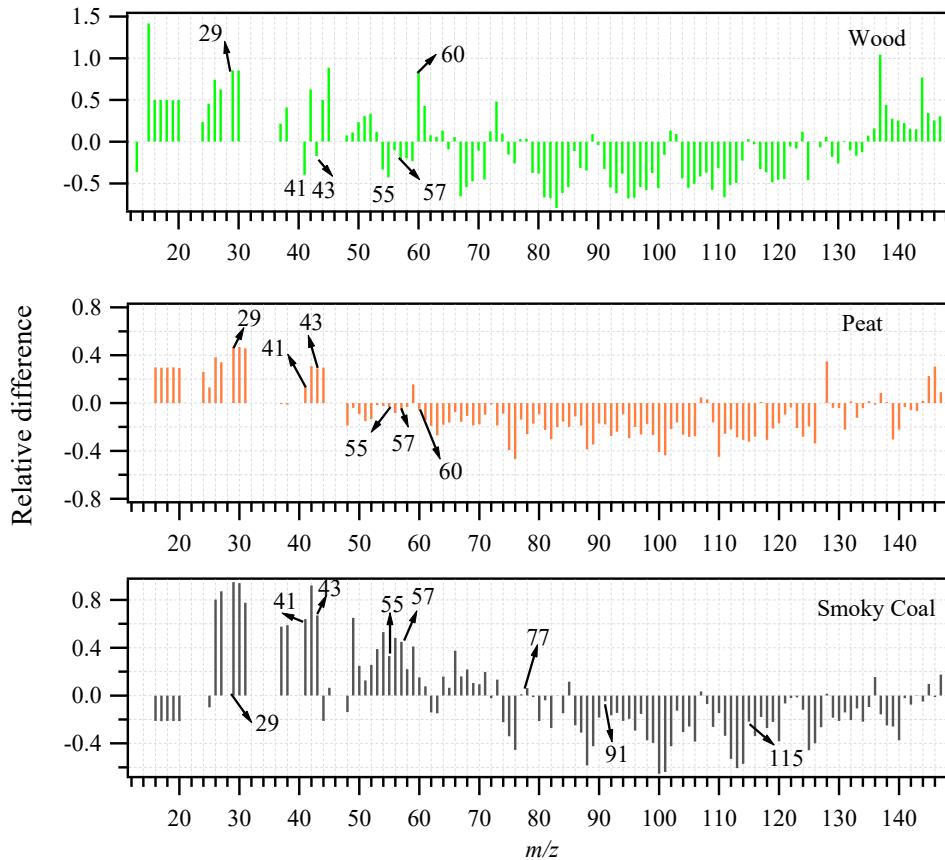
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37 Figure S1. Relative difference at each m/z for the mass spectral profile of wood, peat, and smoky coal

38 burning in the boiler versus the conventional stove.

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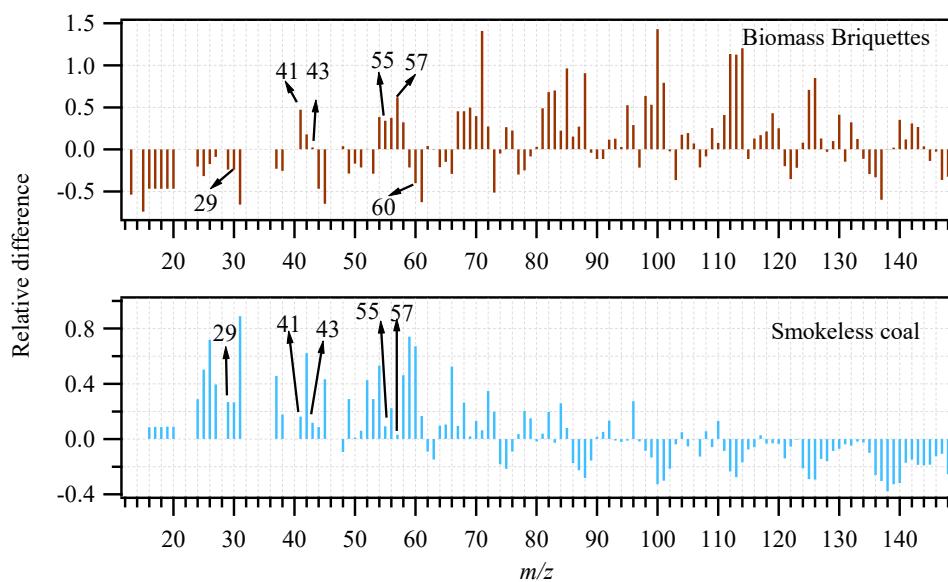
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41 Figure S2. Relative difference at each m/z for the mass spectral profile of biomass briquettes and

42 smokeless coal burning in the conventional versus Ecodesign stove.

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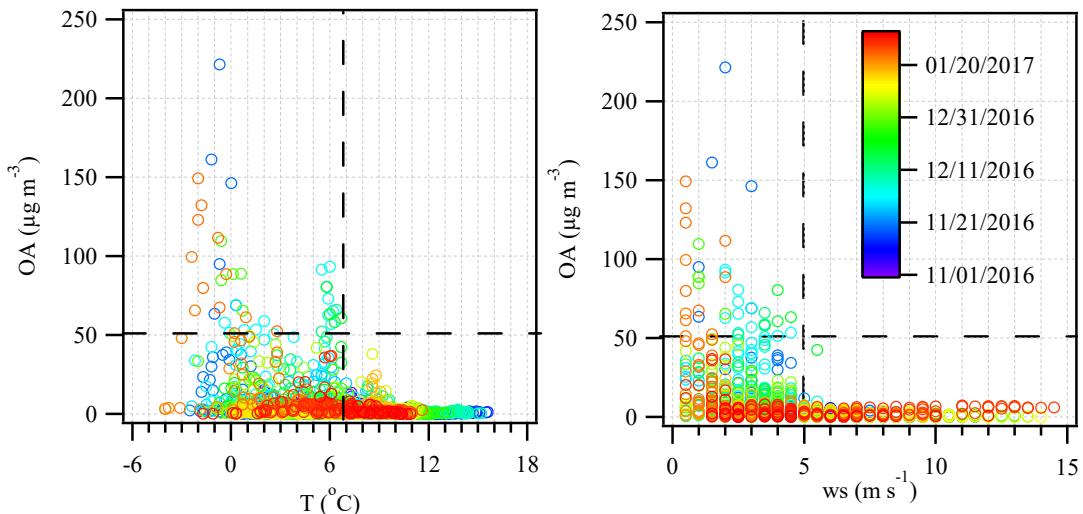
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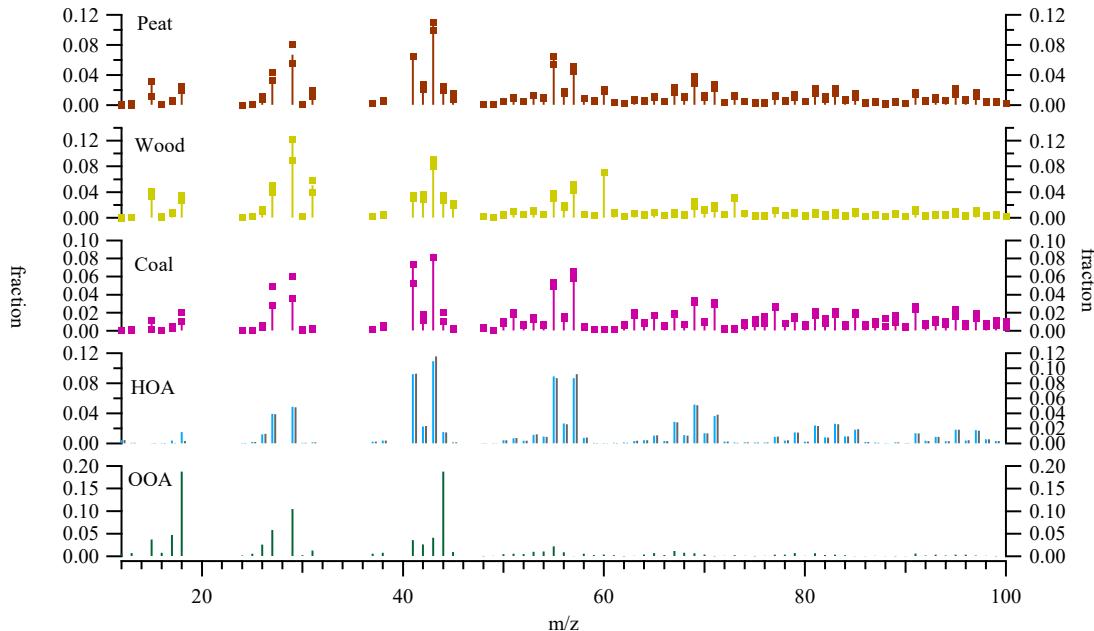
Figure S3. Scatter plot between OA and temperature (left panel); and wind speed (right panel), color-coded by date.

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49 Figure S4. Mass spectra (left axis) of the OA factors of peat, wood, coal, HOA, and OOA. The dots

50 shown for the peat, wood, coal OA factors were the upper/lower limits allowed to vary. Also shown is

51 the reference HOA profile (great sticks in Fourth row) from Crippa et al. (2013)

52

53 **Reference:**

54 Crippa, M., Canonaco, F., Slowik, J. G., El Haddad, I., Decarlo, P. F., Mohr, C., Heringa, M. F., Chirico,

55 R., Marchand, N., Temime-Roussel, B., Abidi, E., Poulain, L., Wiedensohler, A., Baltensperger, U., and

56 Prévôt, A. S. H.: Primary and secondary organic aerosol origin by combined gas-particle phase source

57 apportionment, Atmos. Chem. Phys., 13, 8411-8426, 10.5194/acp-13-8411-2013, 2013.

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