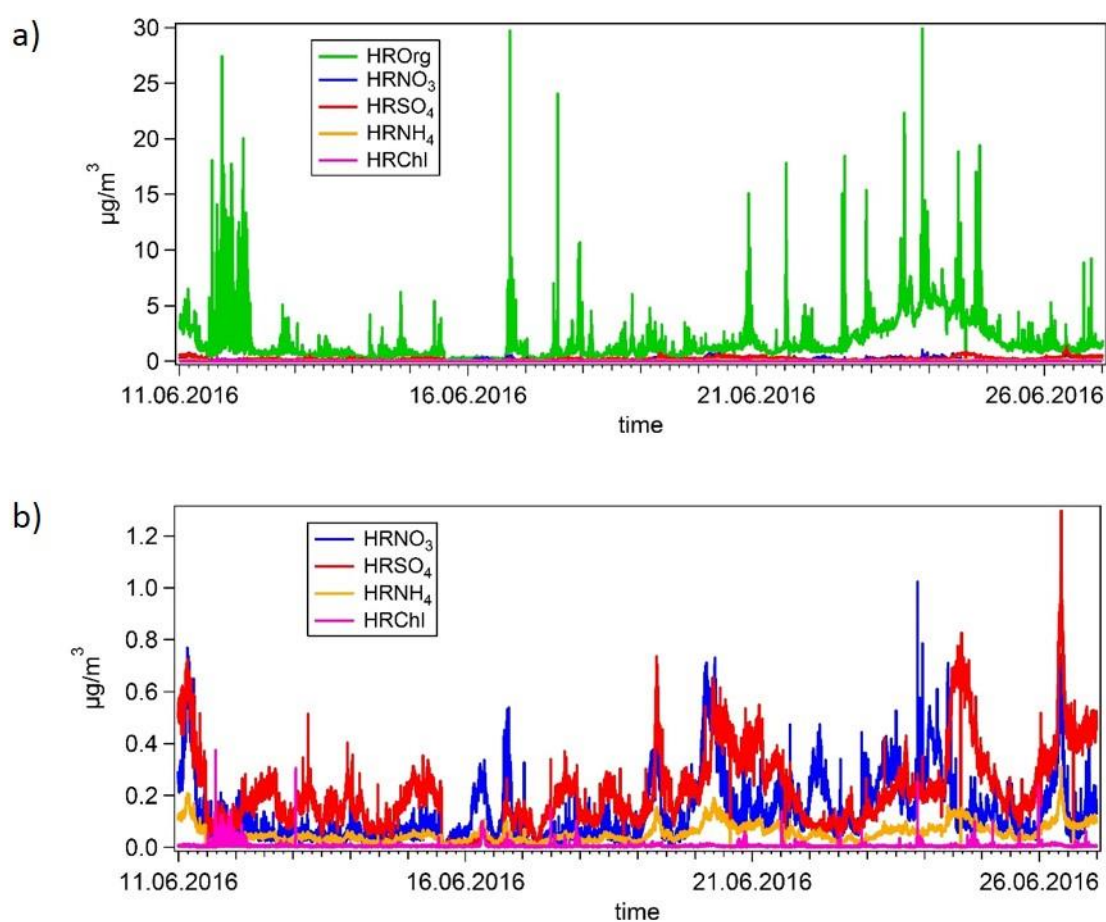


Supplement of:

Organic aerosol source apportionment in Zurich using extractive electrospray ionization time-of-flight mass spectrometry (EESI-TOF): Part I, biogenic influences and day/night chemistry in summer

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10 **Figure S1.** High resolution AMS time-series of all measured species a) and without organics b).

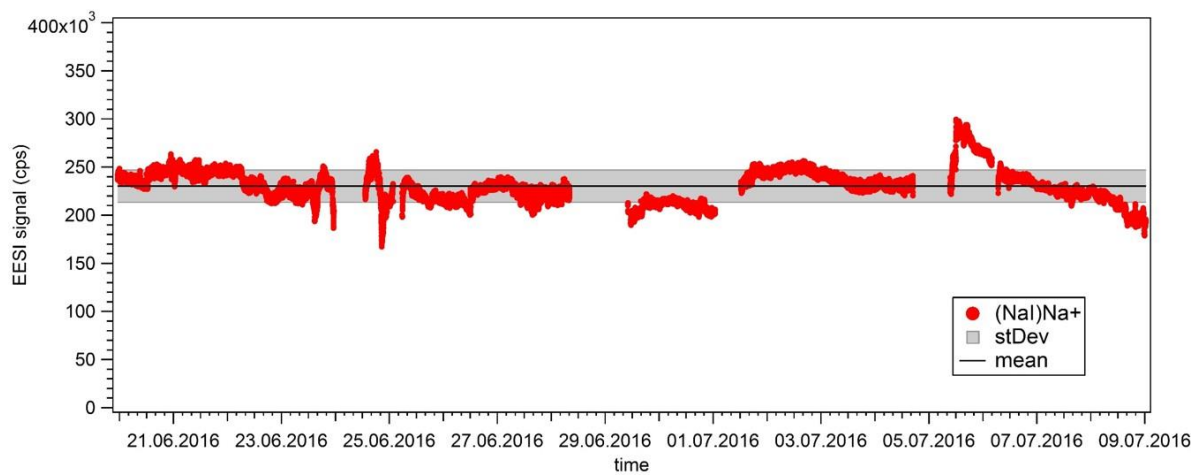
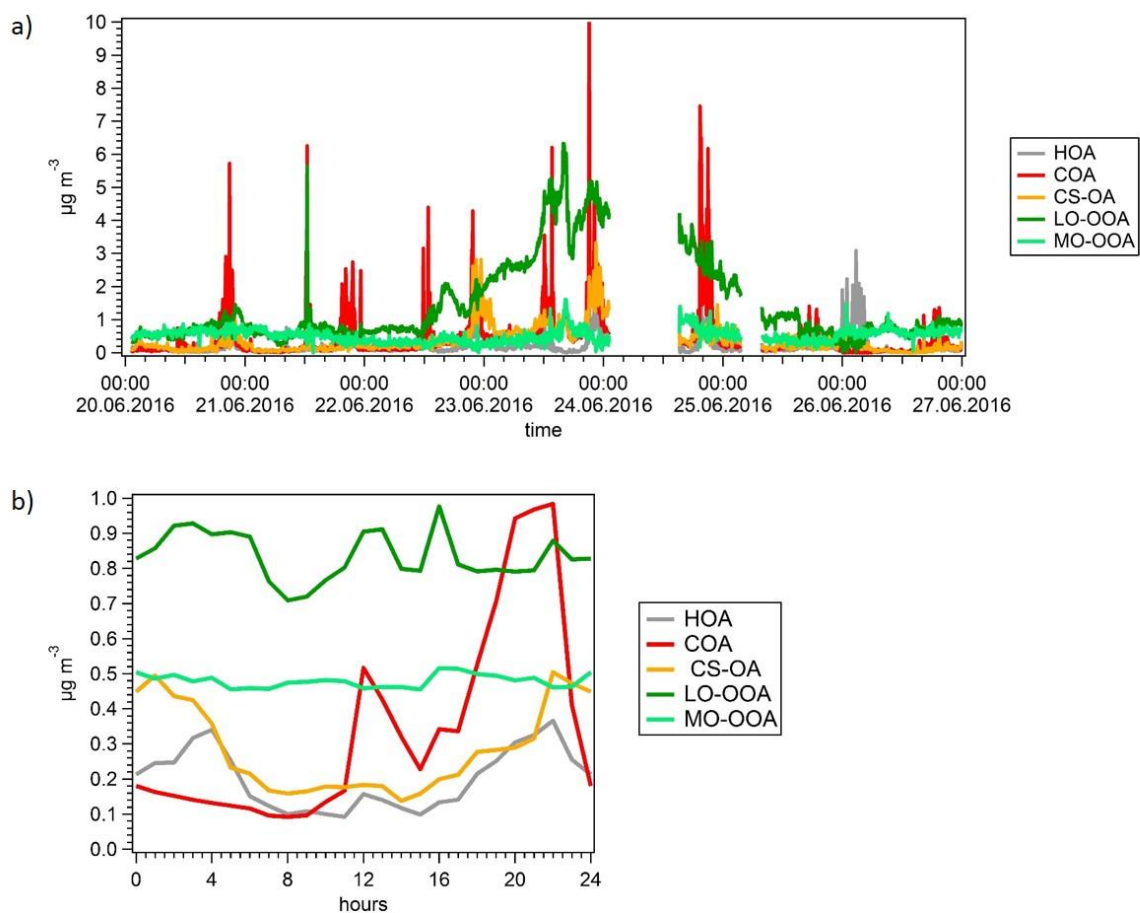


Figure S2. Time-series of (NaI)Na⁺ including average and standard deviation in cps.



5 **Figure S3.** AMS PMF factors time-series a) and diurnal profiles b).

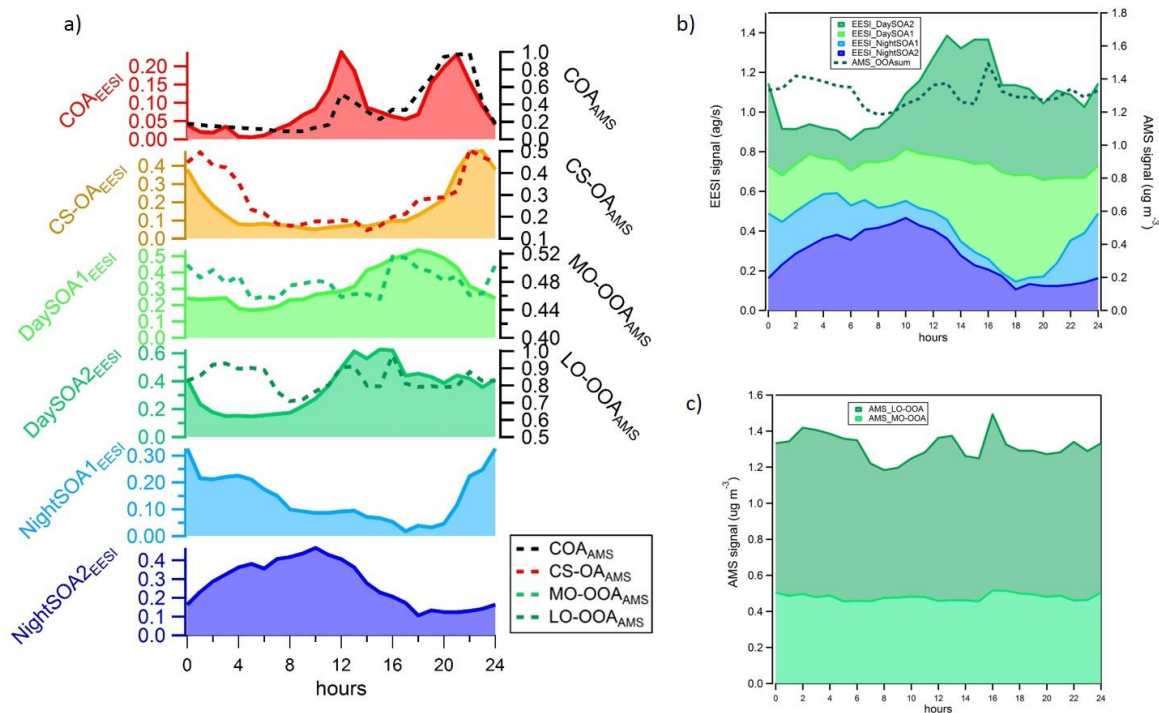


Figure S4. a) EESI-TOF PMF factor diurnals for the overlapping period only on the left axis (ag s^{-1}) and counterpart diurnal from AMS PMF analysis on the right axis ($\mu\text{g m}^{-3}$). b) Stacked diurnal variations of the EESI-TOF SOA factors (left axis) and the AMS OOA sum (right axis). c) Stacked diurnal variations of the AMS OOA factors.

5

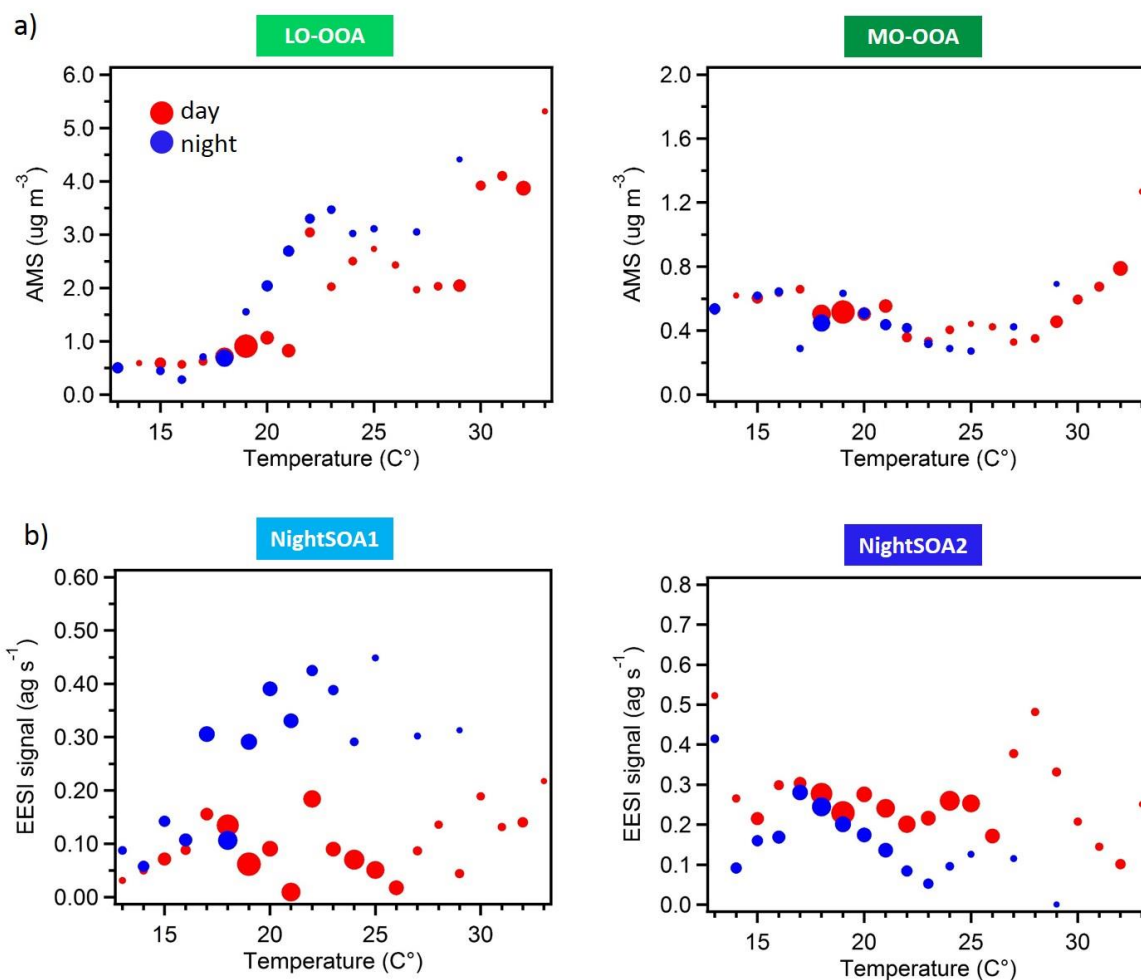


Figure S5. Correlation of a) AMS OOA factors and b) EESI-TOF NightSOA factors with ambient temperature (C°) during the measurements period. The data are color-coded according to day (red) and night (blue) measurements time, they are grouped in temperature bins of $1 C^{\circ}$ and the size of the dots corresponds to the number of points considered. Data corresponding to precipitation time has been discarded.

5

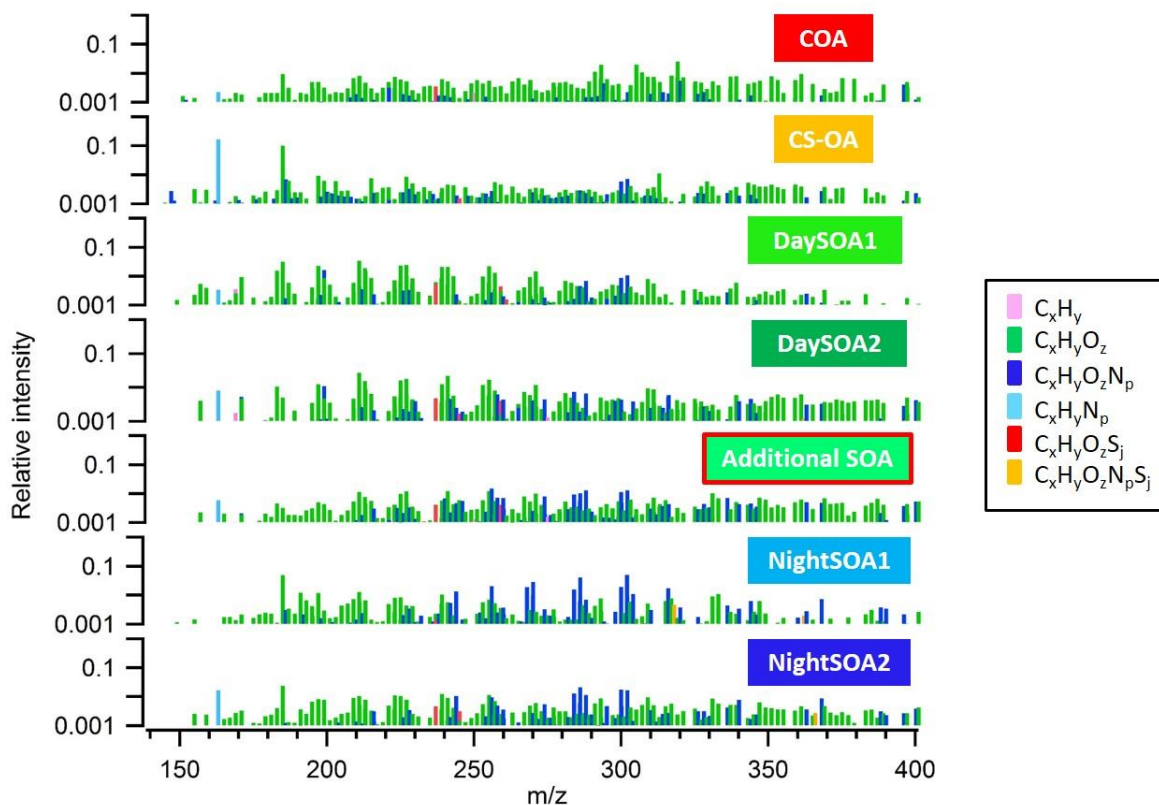


Figure S6. Mass spectra (log scale) of the seven identified OA EESI-TOF PMF factors, color-coded according to their chemical families for the 7-factor solution. All peaks are first weighted according to their molecular weight and then normalized such that the sum of each spectrum is 1. The final solution is based on 6 factor, where the additional SOA factor is combined with the other daytime SOA factors.

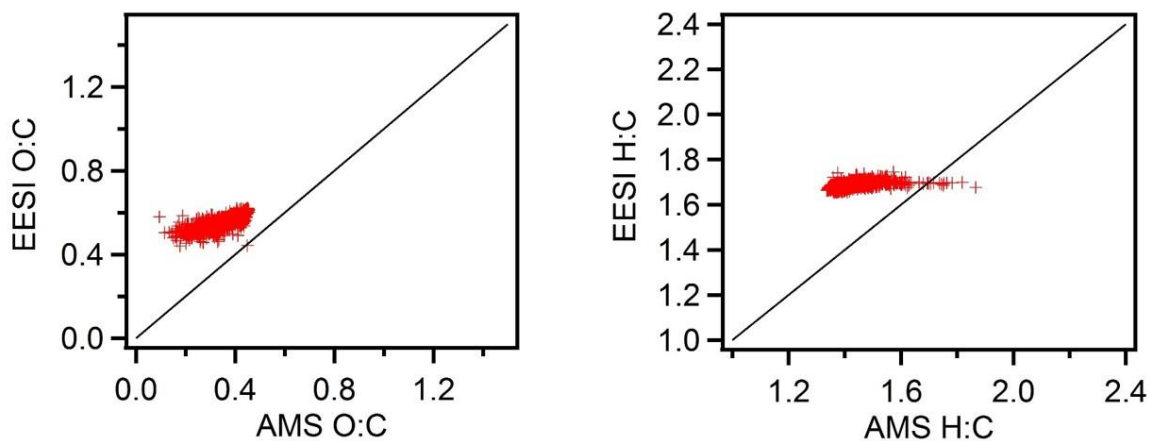


Figure S7. Atomic ratios for the total EESI and AMS signal.