Supplementary material
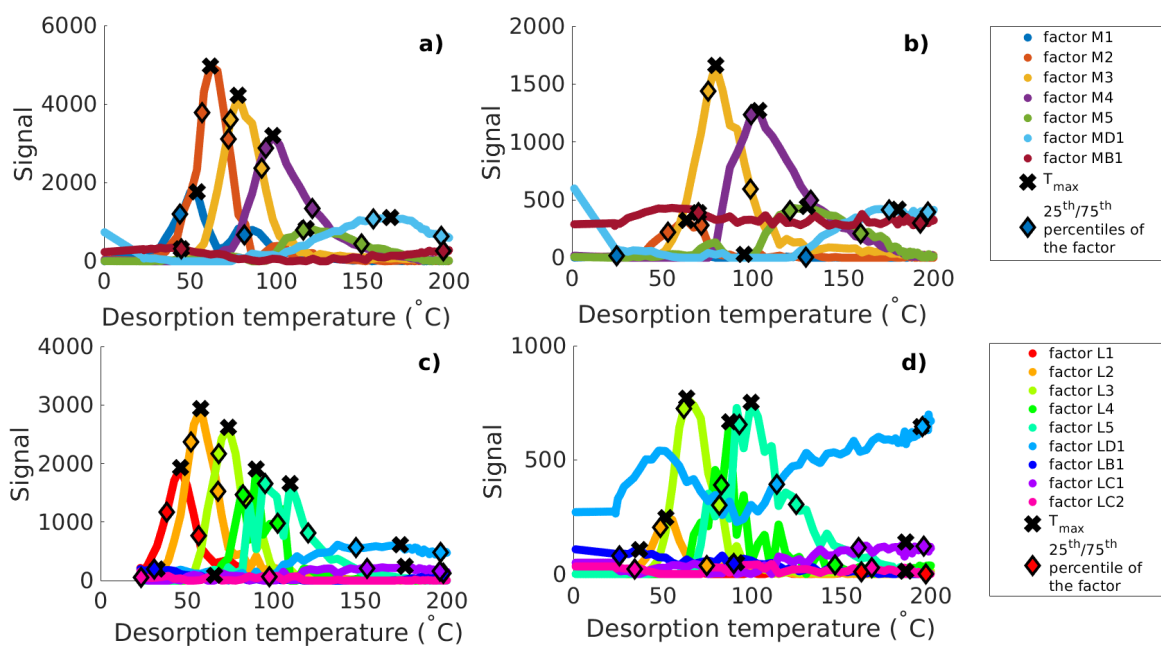
Figure S1: Full PMF mass laoding profiles for a) medium O:C high RH fresh sample, b) medium O:C high RH RTC sample, c) low O:C high RH fresh sample, d) low O:C high RH RTC sample. The black crosses show the peak desorption temperature T_{max} and the diamonds show the 25th and 75th percentiles of the factors area. In medium O:C samples' analysis factor MB1 is omitted and factor MD1 is divided in to new factor MD1a and new factor MD1b. In low O:C samples' analysis factors LC1 and LC2 are omitted and factor LD1 is divided into new factor LD1a and new factor LD1b. See Sect. 3.1 in the main text for details
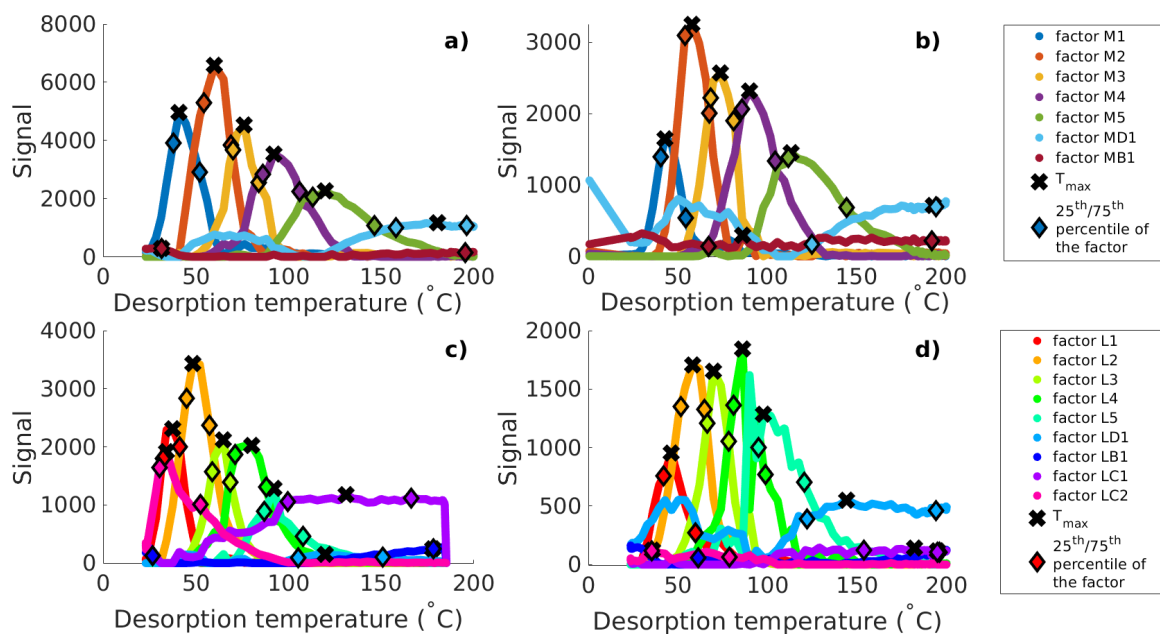
Figure S2: Full PMF mass laoding profiles for a) medium O:C low RH fresh sample, b) medium O:C low RH RTC sample, c) low O:C low RH fresh sample, d) low O:C low RH RTC sample. The black crosses show the peak desorption temperature T_{max} and the diamonds show the 25th and 75th percentiles of the factors area. In medium O:C samples' analysis factor MB1 is omitted and factor MD1 is divided in to new factor MD1a and new factor MD1b. In low O:C sample analysis factors LC1 and LC2 are omitted and factor LD1 is divided into new factor LD1a and new factor LD1b. See Sect. 3.1 in the main text for details
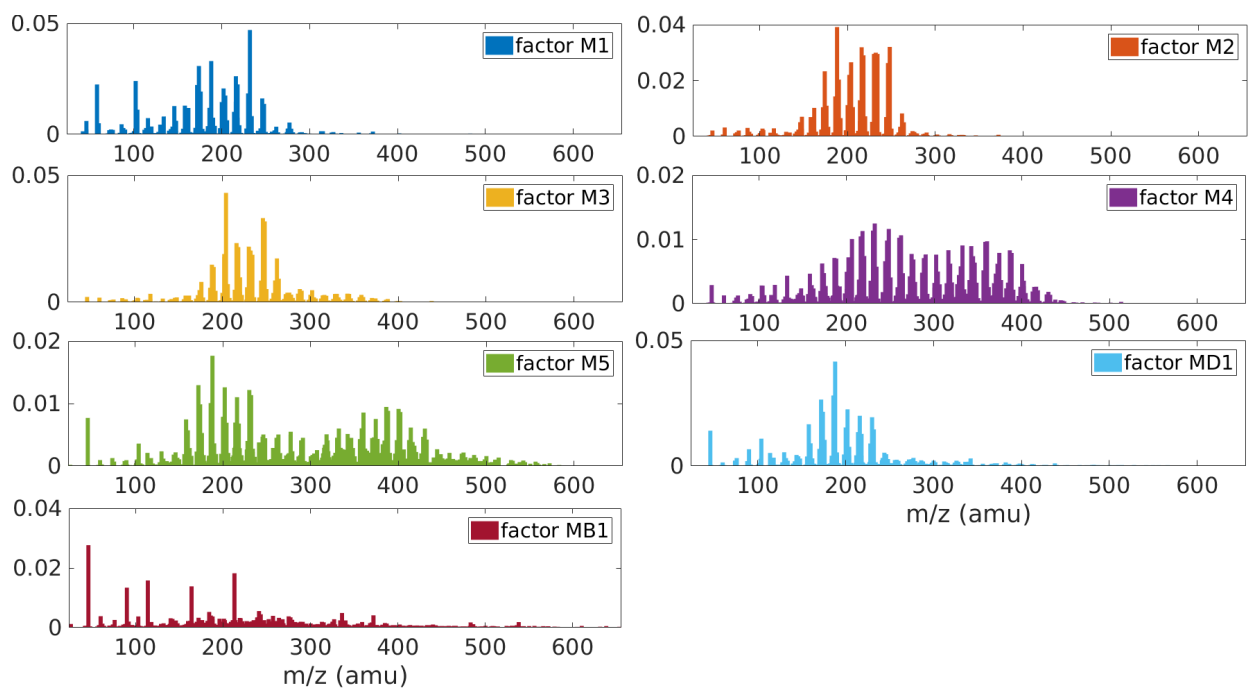
Figure S3: PMF mass spectra for medium O:C samples. These factors correspond to factors shown in Fig. S1 and Fig. S2.
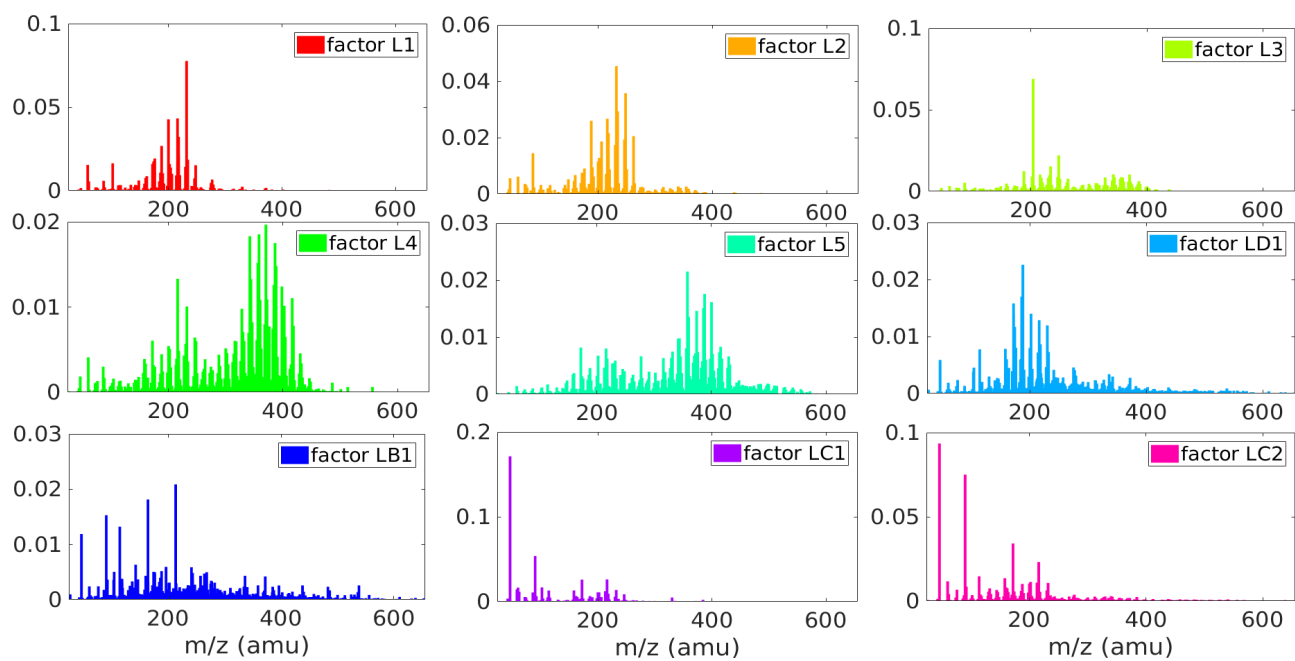
Figure S4: PMF mass spectra for low O:C samples. These factors correspond to factors shown in Fig. S1 and Fig. S2.
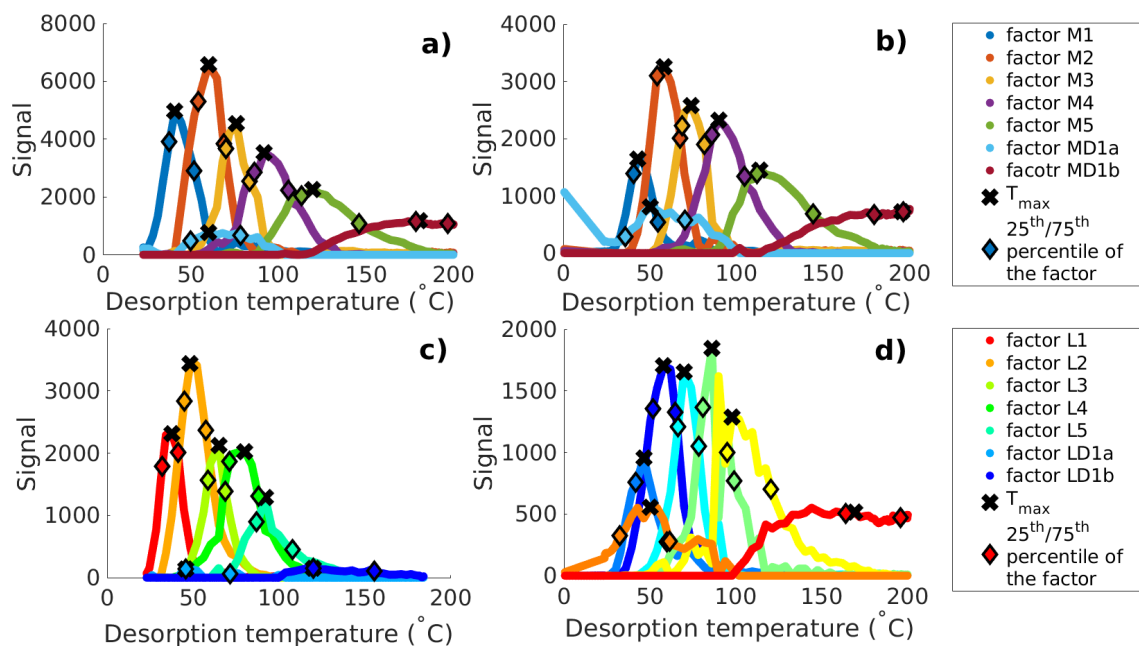
Figure S5: PMF mass loading profiles from experiments performed at dry condition a) medium O:C fresh sample, b) medium O:C low RH RTC sample, c) low O:C low RH fresh sample, d) low O:C low RH RTC sample. The black crosses show the peak desorption temperature T_{max} and the diamonds show the 25th and 75th percentiles of the factors area.
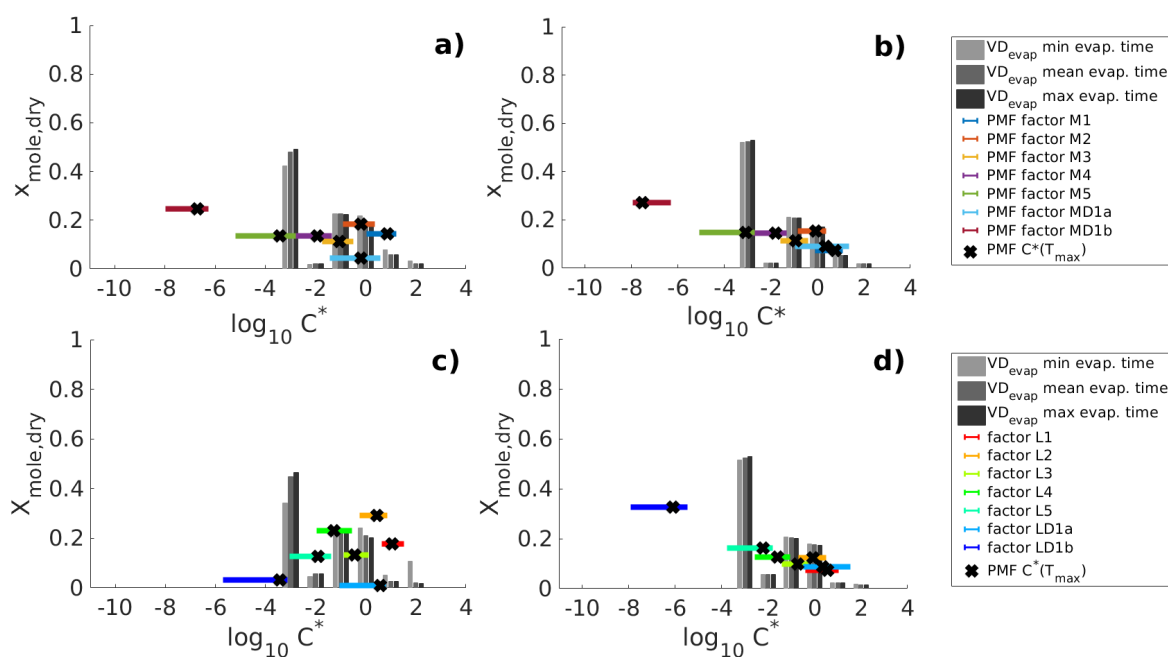
Figure S6: Volatility distributions at dry condition experiments determined from model fitting and PMF analysis on FIGAERO-CIMS data for a) medium O:C fresh sample, b) medium O:C RTC sample, c) low O:C fresh sample, d) low O:C RTC sample. VD_{evap} is shown for the best fit simulation (grey bars). The different grey shades show the particle composition in the simulation at minimum, mean and maximum time that the particles have evaporated when the FIGAERO sample was collected. Black crosses show the $\log_{10}(C^*)$ calculated for each PMF factor from the peak desorption temperature T_{max}. The horizontal colored lines show the range of $\log_{10}(C^*)$ calculated from the temperatures of 25th and 75th percentiles of the area of each PMF factor.