Figure S1: Positive (a) and negative (b) MS of intact Pseudomonas syringae bacteria measured before Expansion 1; Positive (c) and negative (d) MS of the small particles mode, measured before Expansion 1; Positive (e) and negative (f) MS of pure agar particles measured in a separate experiment.
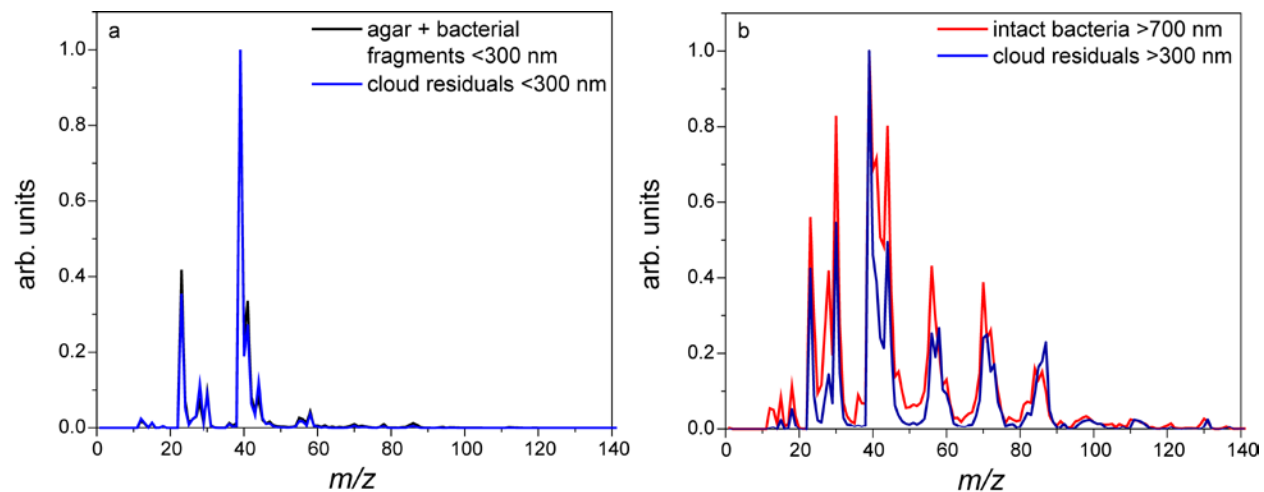
Figure S2: (a) Comparison between the MS of cloud residuals smaller than 300 nm and the reference MS of the small particle mode ($d_{va} < 300$ nm); **(b)** Comparison between the MS of cloud residuals larger than 300 nm and the MS of intact bacteria ($d_{va} > 700$ nm).