

**Figure S1** (a-d) Downstream aerosols concentrations, cm<sup>-3</sup>, for DMA Cases 1-4, with sheath and excess air flow 3 L min<sup>-1</sup>, and aerosol and sample flow of 0.06-0.90 L min<sup>-1</sup>. (e-h) Downstream concentrations for DMA Cases 1 and 5-7, with sheath air flow 3.0 L min<sup>-1</sup>, sample flow 0.30 L min<sup>-1</sup>, and excess air flow 2.94-3.06 L/min.