

Supporting Information for: An Effective Approach for Coupling Direct
Analysis in Real Time with Atmospheric Pressure Drift Tube Ion Mobility
Spectrometry, by Keelor et al.

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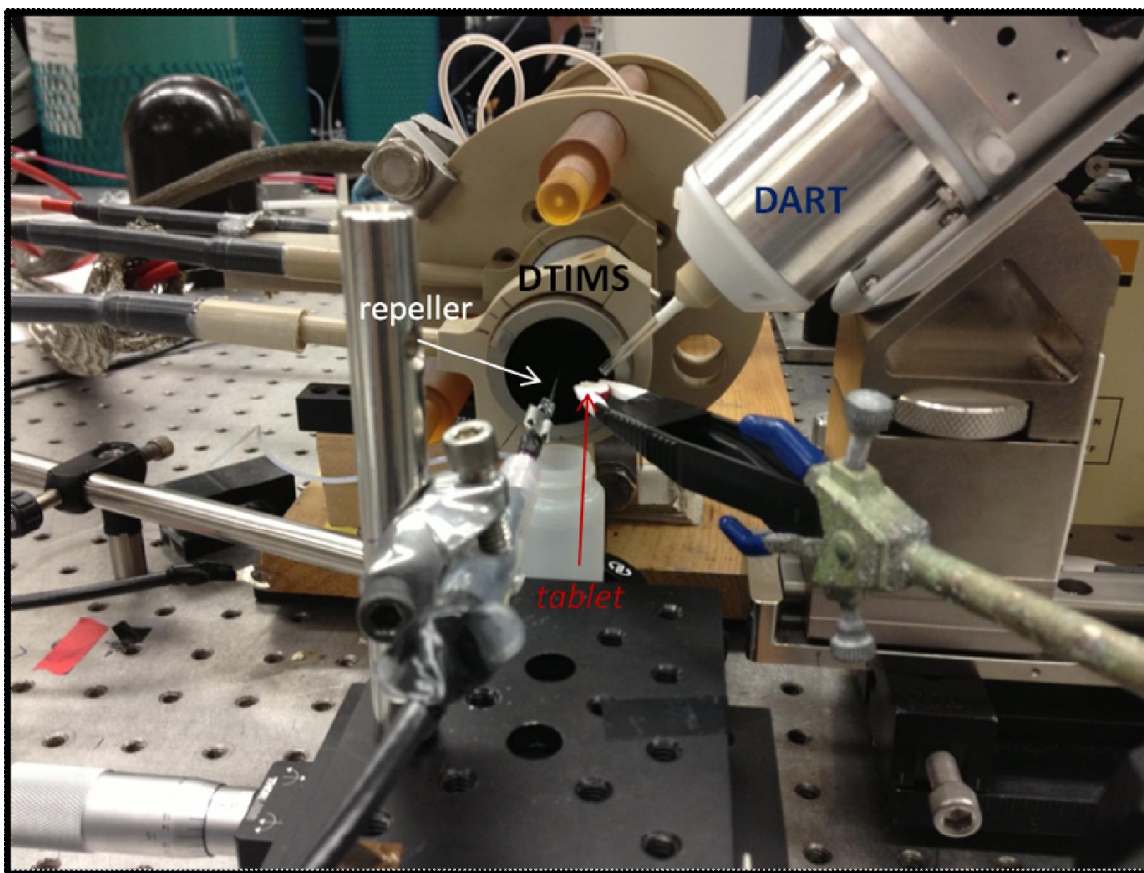


Figure S-1. Image of one orthogonal DART DTIMS sampling configurations employed for solid tablet analysis. The arrangement shows the DART source angled 45° over a tablet situated between the coaxial repeller electrode and inner lip of the DTIMS inlet.

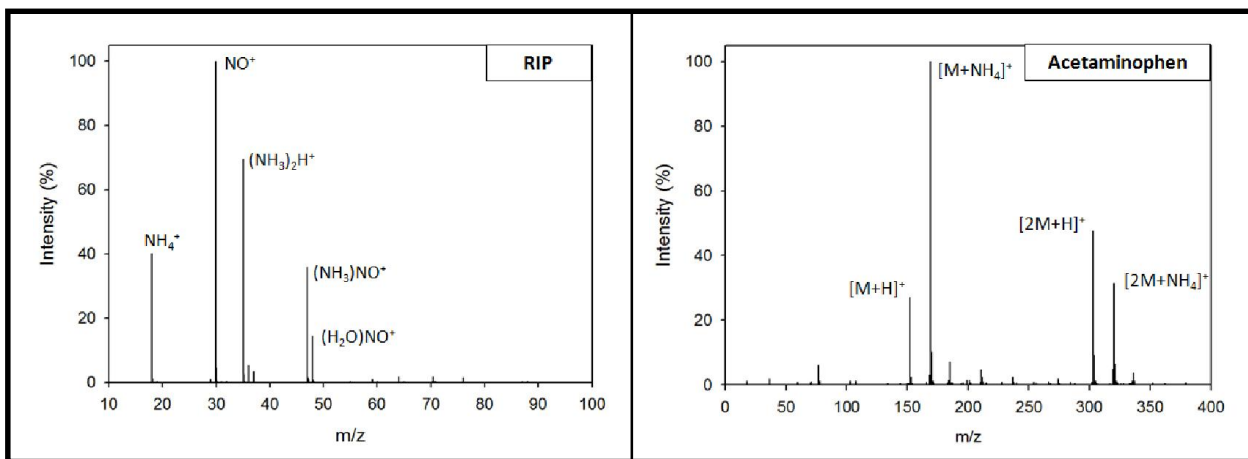


Figure S-2. Mass spectra of reactant ions peaks observed for N₂ DART and ions observed for the analysis of an acetaminophen tablet collected on a JEOL AccuTOF mass spectrometer. The DART heater temperature was 350 °C and the grid voltage was 500 V. (AccuTOF settings: orifice 1, 10 V; orifice 2, 2 V; ring lens, 8 V; sweep voltage, 120-280 V; pusher bias, 29 V). To assist in species identification, single-point drift correction was performed using a 2,6-DtBP as a reference.

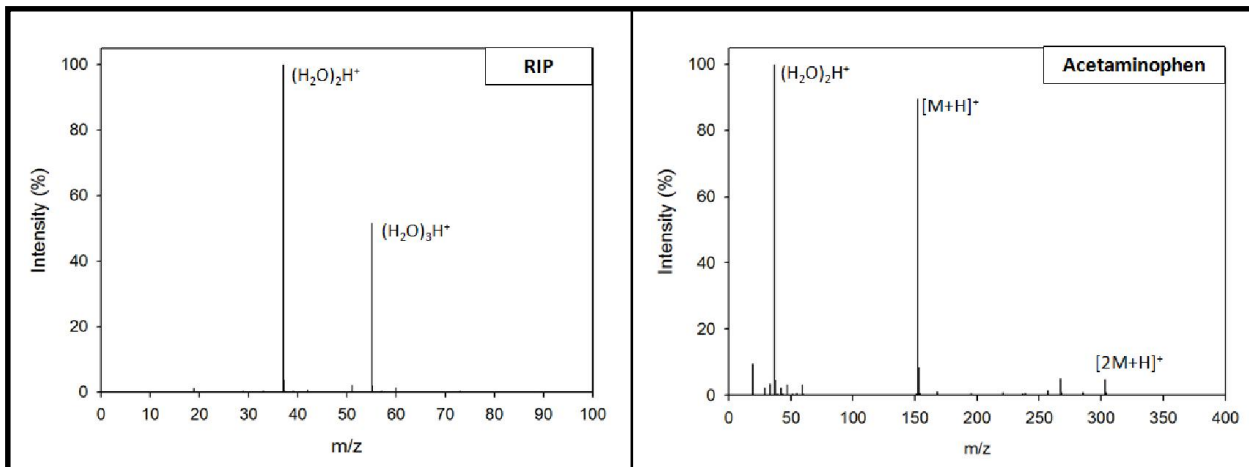


Figure S-3. Mass spectra of corona (3500 V) reactant ion population and ions from an acetaminophen tablet collected on JEOL AccuTOF mass spectrometer. DART (plasma off) heater temperature was 350 °C. (AccuTOF settings: orifice 1, 10 V; orifice 2, 2 V; ring lens, 8 V; sweep voltage, 120-280 V; pusher bias, 29 V).

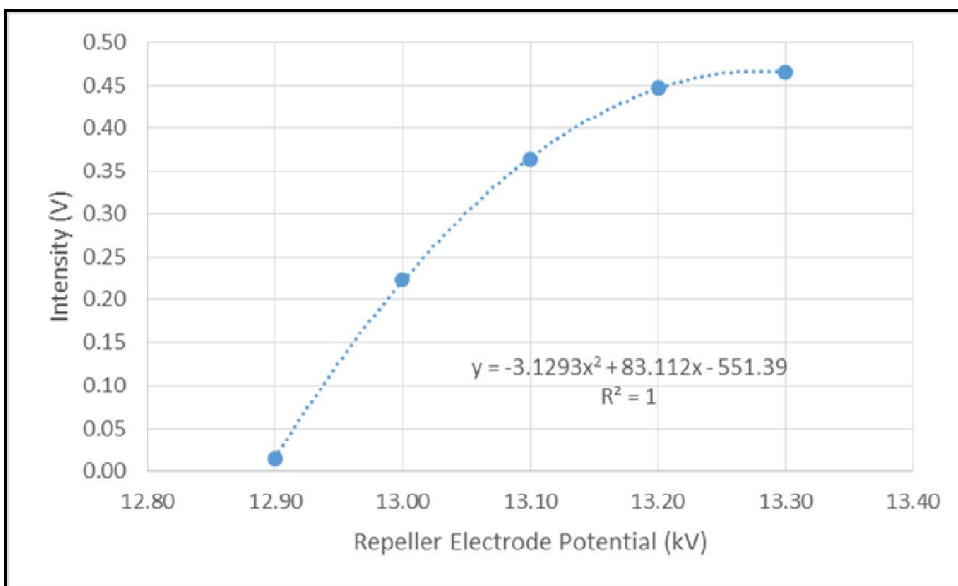


Figure S-4: Signal intensity of 2,6-DtBP protonated monomer as a function of the repeller electrode potential with the DART source plasma on. Data points were extracted from potential traces in Figure 4A for a repeller electrode distance of $z=7$ mm inside the DTIMS inlet.