Supporting Information

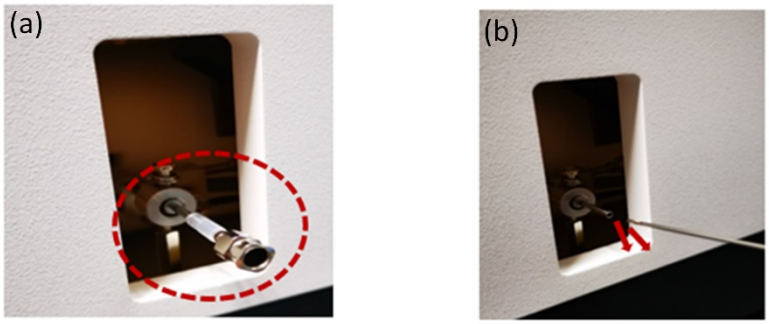

Figure S1. Physical photograph of the rapid thermal desorption sampling needle. (a) The injection needle was inserted into the instrument, (b) after the analysis was completed, the injection needle was removed to clean the picture.

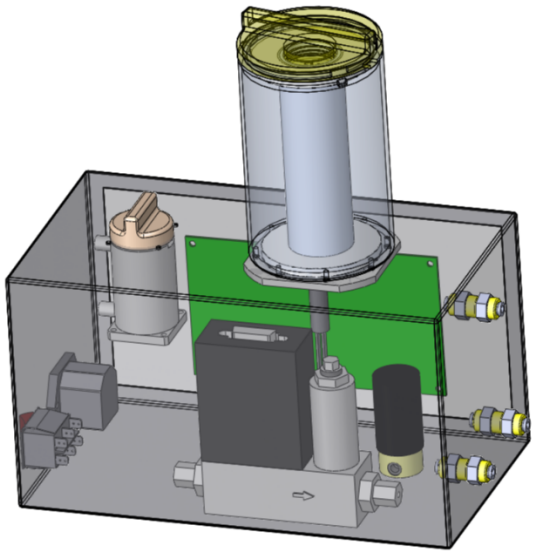

Figure S2. Three-dimensional schematic of the rapid analytical device for aroma substances in flavored filter rods.

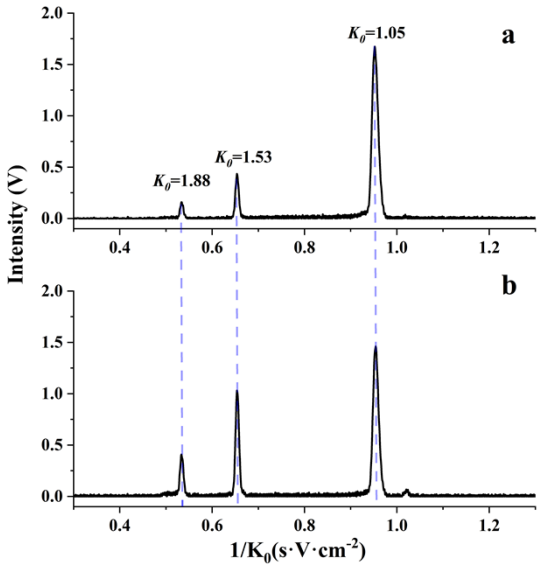

Figure S3. Single spectra of 1 mg·mL^{-1} WS-23 (a) and peppermint flavor (b) samples.

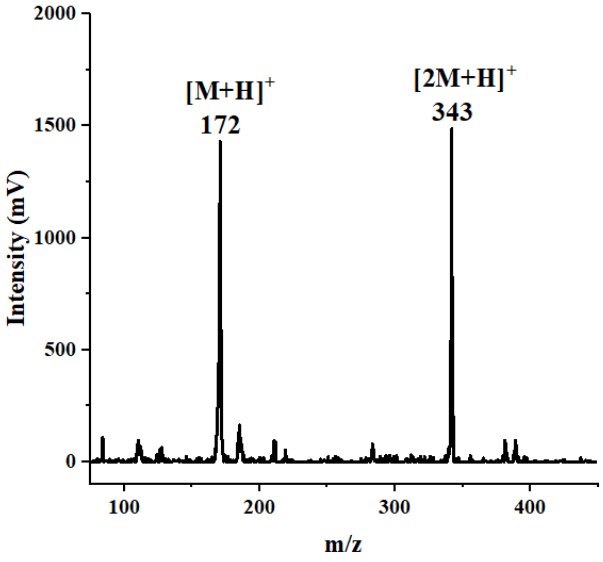

Figure S4. ITMS mass spectrum of 1 mg·mL^{-1} WS-23.

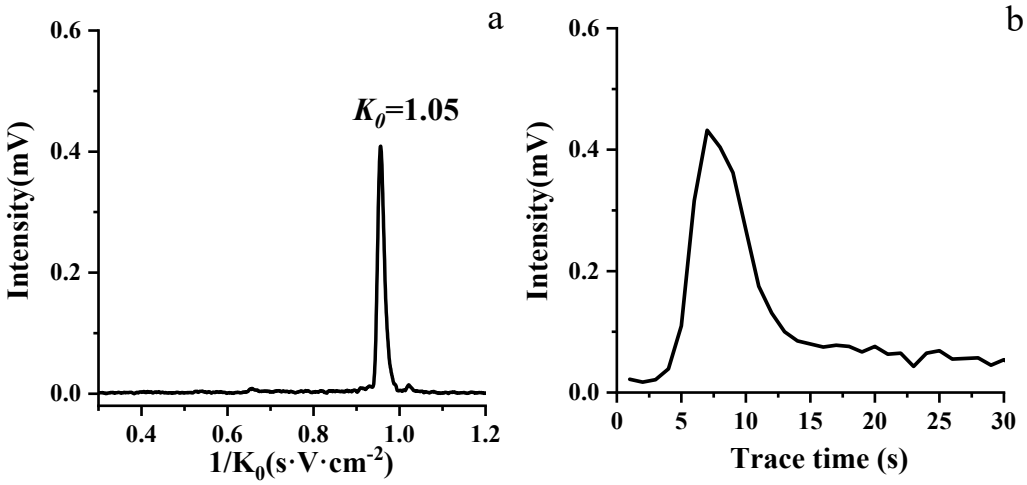

Figure S5. Single spectrum (a) and tracking spectrum of the characteristic peak (K_0 = 1.05 $cm^2 \cdot V^{-1} \cdot s^{-1}$) (b) of 1 $mg \cdot mL^{-1}$ WS-23 (solvent: caprylic triglyceride).

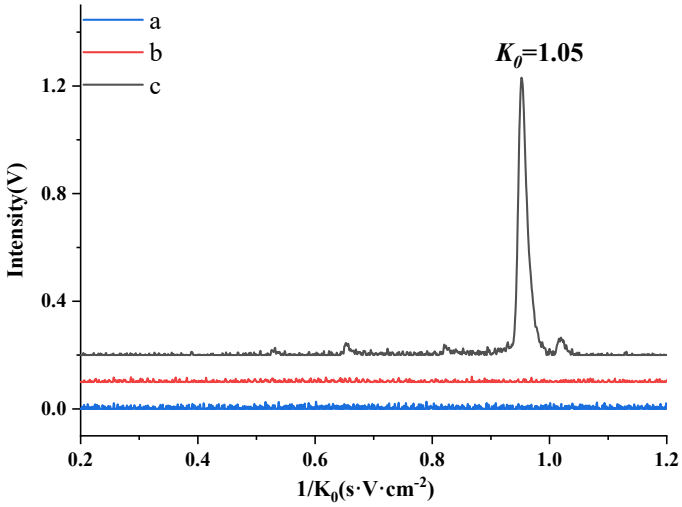

Figure S6. Effect of the filter rod on detection: (a) the detection spectrum of the blank filter rod, (b) the detection spectrum of the blank filter rod after adding 100 μL caprylic triglyceride, and (c) the detection spectrum of the blank filter rod after adding 100 μL 1 $mg \cdot mL^{-1}$ WS-23 solution with caprylic triglyceride as the solvent.