

Robotic sheath-flow probe electrospray ionization/mass spectrometry (sfPESI/MS): development of a touch sensor for samples in a multiwell plastic plate

Kenzo Hiraoka,* Osamu Ariyada, Ryo Sekine, Satoshi Ninomiya, Dilshadbek T. Usmanov,
Hiroshi Wada, and Hiroshi Nonami

Supporting Information

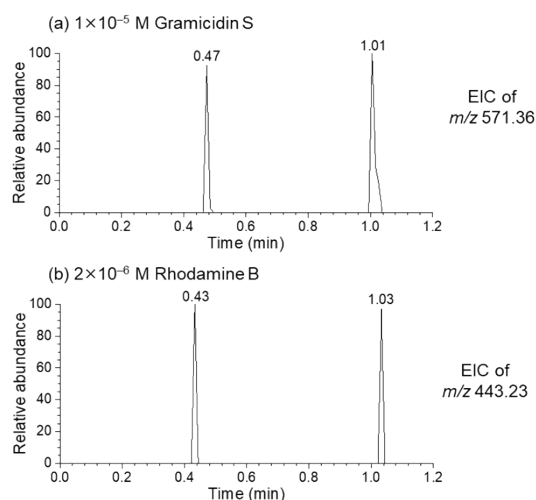


Fig. S1. Two consecutive measurements of EICs of (a) $[(\text{gramicidin S}) + 2\text{H}]^{2+}$ (m/z 571) for 1×10^{-5} M gramicidin S in water/methanol (1/1), and (b) $[(\text{rhodamine B}) - \text{Cl}]^{+}$ (m/z 443) for 2×10^{-6} M rhodamine B in water/methanol (1/1). The probe tip coated by perfluoroalkyl film was used. The contact time of the probe with the sample: ~ 50 ms, invasion depth of the probe to the sample solution: 0 mm. HV applied to the needle: 2.5 kV, HV duration time for the acquisition of the mass spectra: 5 s.

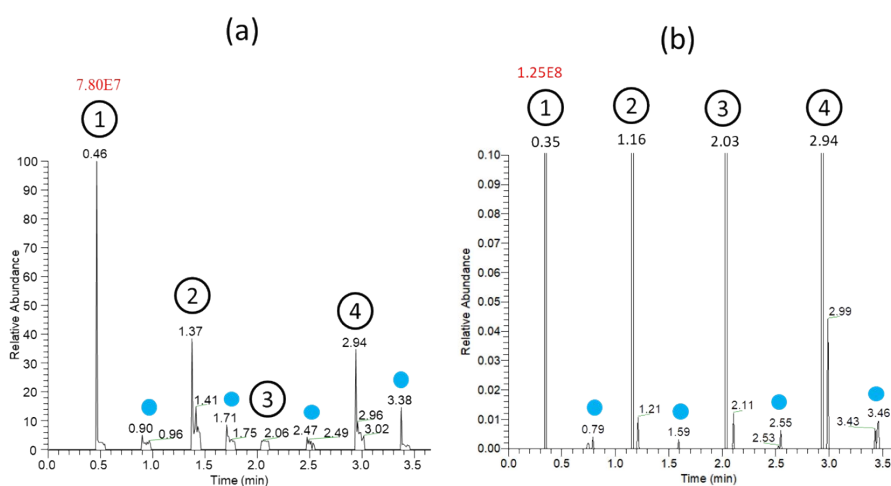


Fig. S2. EIC of $[\text{Hex} + \text{K}]^{+}$ (m/z 219) for the four real samples: ① vegetable juice, ② orange juice, ③ squeezed mandarin fruit juice, and ④ refreshing drink. (a) Water/methanol (1/1) solvent used for cleansing. (b) Water/methanol/acetonitrile (1/1/1) used for cleansing. The contact time of the probe with the sample and with the solvent for cleansing: ~ 50 ms, invasion depth of the probe to the sample solution and to the solvent for cleansing: 0 mm. HV applied to the needle: 2.5 kV, HV duration time for the acquisition of the mass spectra: 5 s.

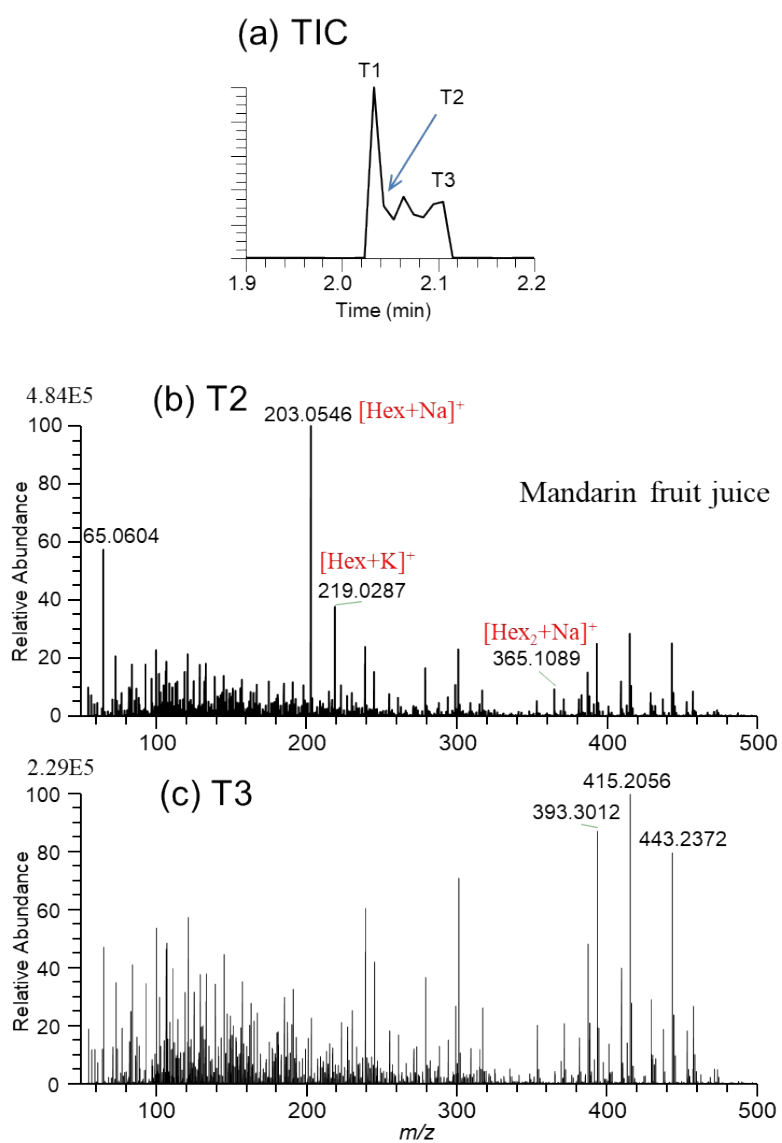


Fig. S3. (a) TIC for squeezed juice of mandarin fruit. (b) Mass spectrum obtained at T2. (c) Mass spectrum obtained at T3. The contact time of the probe with the sample and with the solvent for cleansing: ~ 50 ms, invasion depth of the probe to the sample: 0 mm. HV applied to the needle: 2.5 kV, HV duration time for the acquisition of the mass spectra: 5 s.