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Supporting information

Rapid Detection of Furanyl Fentanyl in Complex Matrices Using Leidenfrost Desorption-Assisted Low-Temperature Arc Plasma Ionization Mass Spectrometry

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Keywords: Leidenfrost desorption; Furanyl fentanyl; Low-temperature arc plasma ionization; Mass spectrometry

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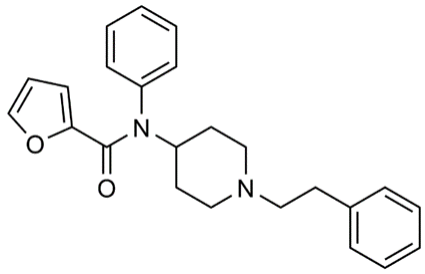

Figure S1. Furanyl fentanyl structural formula（MW = 374.19）

Figure S2: Mass Spectrum of Furanyl Fentanyl in Aqueous Solution

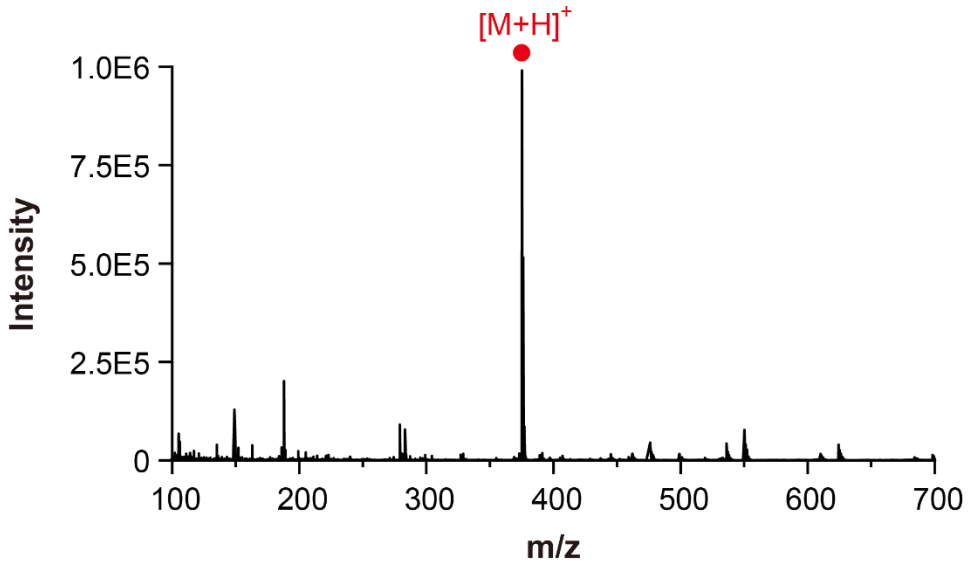

Figure S2. Mass spectrum of furanyl fentanyl (3µg/mL) in aqueous solution

Figure S3: Microscopic Inspection of Leidenfrost Desorption

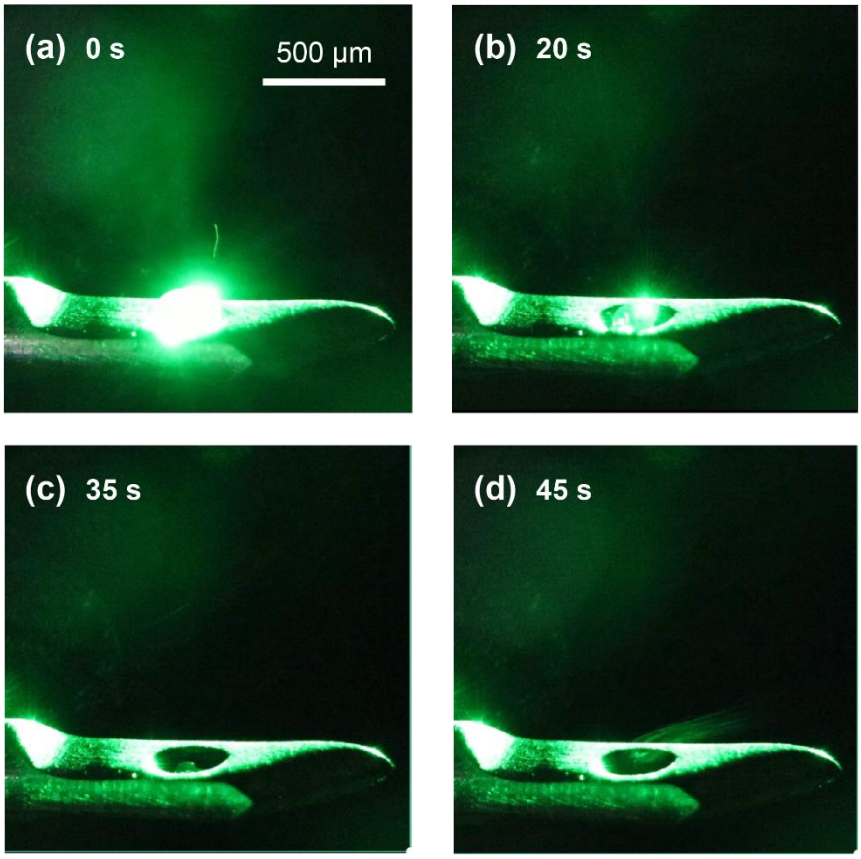

Figure S3. Microscopic inspection of the Leidenfrost desorption with 5 µL of pure water droplets in the 420 ℃ heater. The images were taken at different time points using laser illumination. (a) 0 s, (b) 20 s, (c) 35 s, (d) 45 s. The moment when the droplet was initially injected into the heater groove is defined as the initial time.

Figure S4: Mass Spectra of Furanyl Fentanyl in Different Complex Matrix Solutions

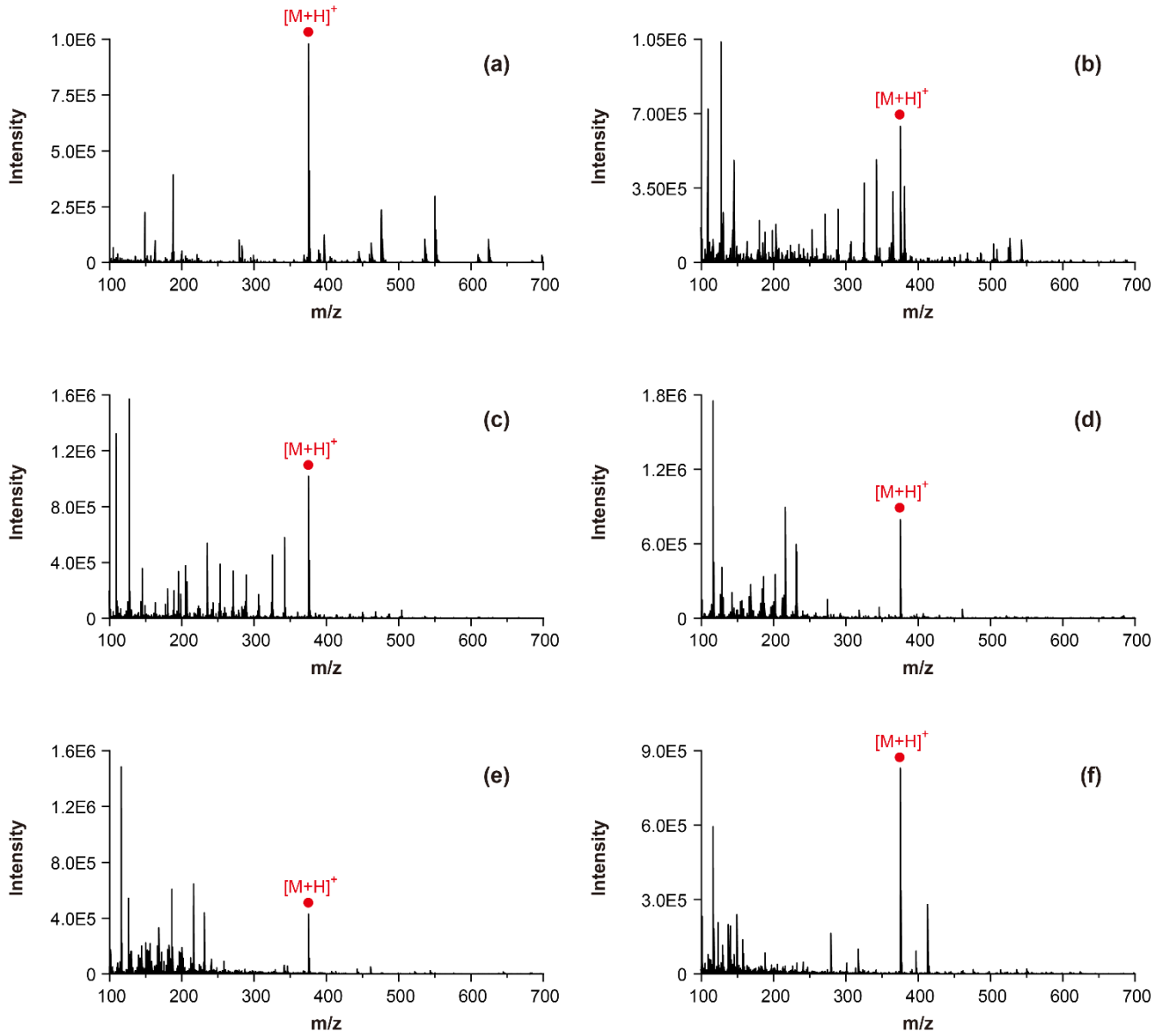

Figure S4. Mass spectra of furanyl fentanyl in (a) lake water, (b) Master Kong Fresh juice, (c) Coca-Cola, (d) Great Wall Dry Red wine, (e) Great Wall Five-Star wine, and (f) Sangou Laojiao liquor. The complex matrix solutions were diluted with pure water at a 1/1 v/v. Furanyl fentanyl concentration: 3μg/mL for (a), (b), and (c), 2μg/mL for (d), (e), and (f).