

Direct Analysis of Drugs in Forensic Applications using Laser Ablation Electrospray Ionization-Tandem Mass Spectrometry (LAESI-MS/MS).

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Supplemental Information:

The following are supplemental figures associated with this manuscript that
illustrate and support the claims made in the original manuscript.

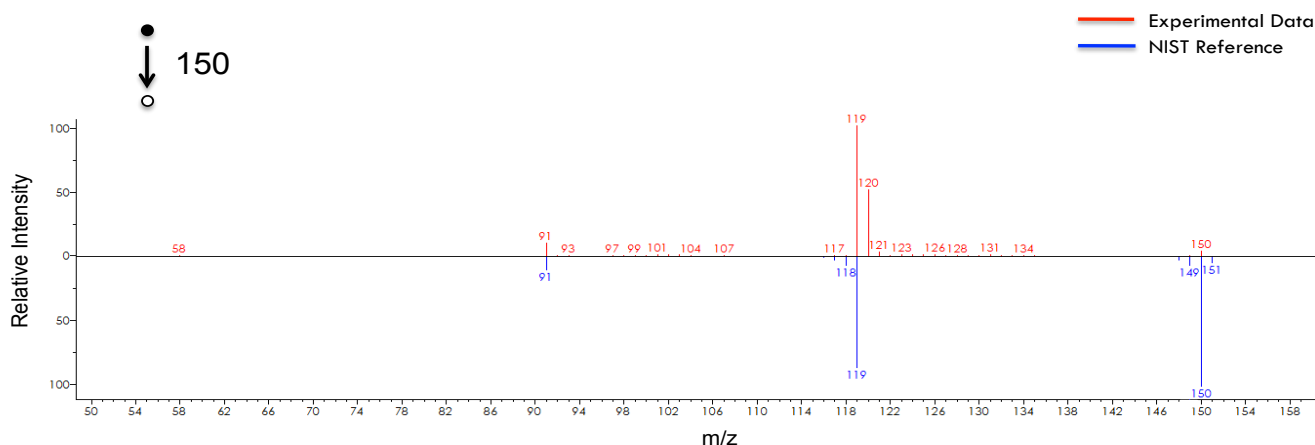


Figure S-1. An example of the comparison between the experimental and NIST reference data for a positive identification of amphetamine standard. The experimental data (top in red) is shown head-to-tail with the NIST reference spectrum (bottom in blue).

— Experimental Data
— NIST Reference

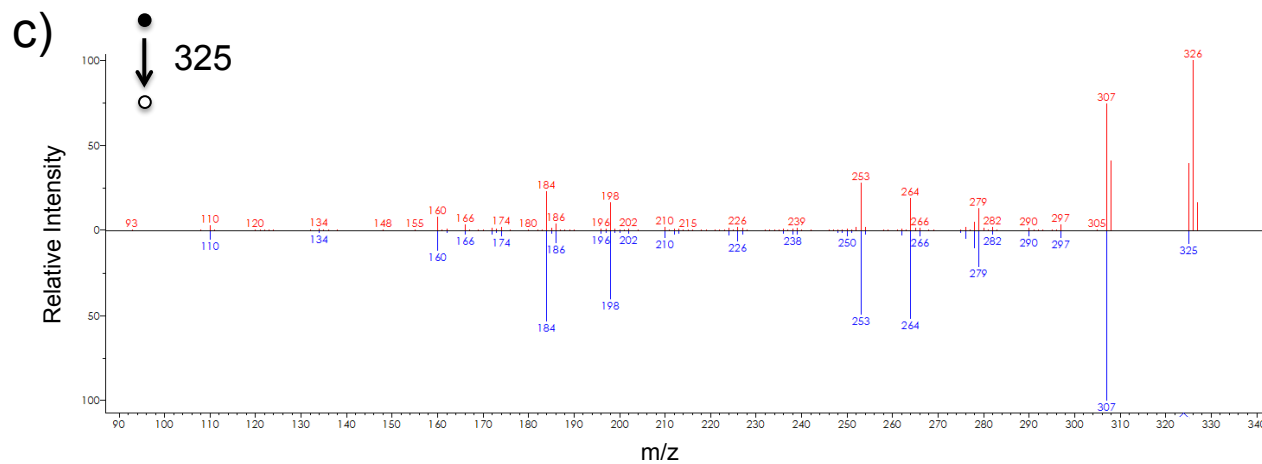
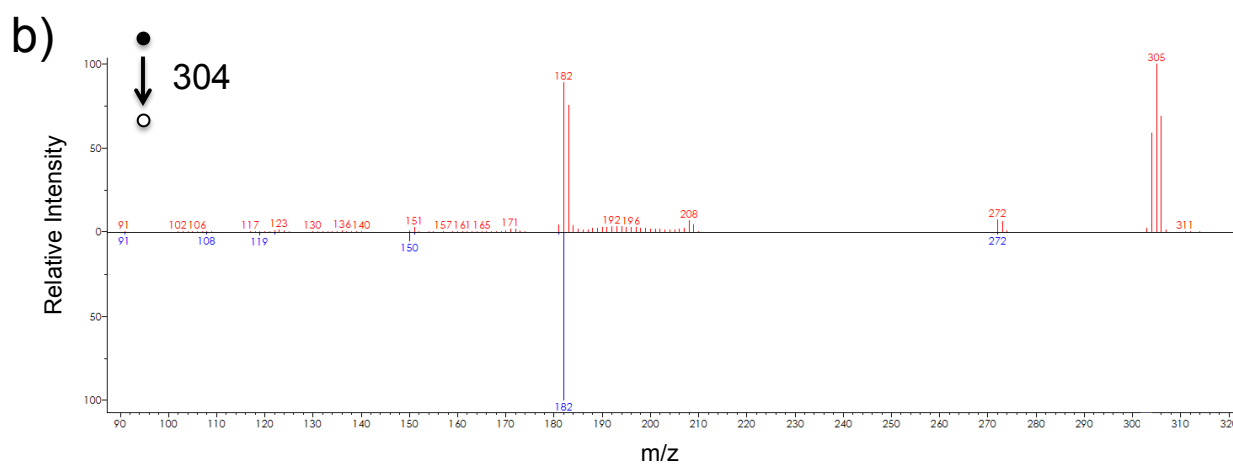
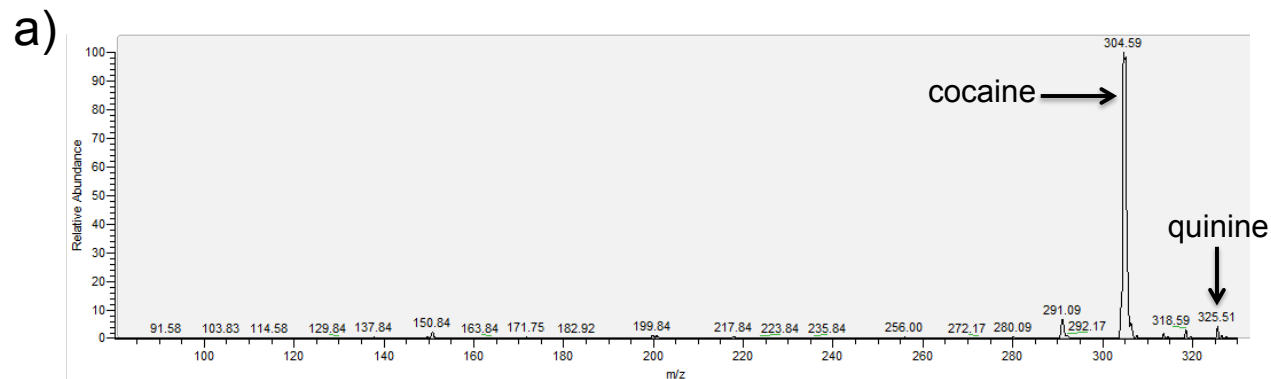


Figure S-2. Comparison of a) full-scan MS spectra of 50:50 quinine (m/z 325) and cocaine (m/z 304) as well as b) the tandem MS of the m/z 304 cocaine precursor ion and c) the tandem MS spectrum of the m/z 325 quinine precursor ion.

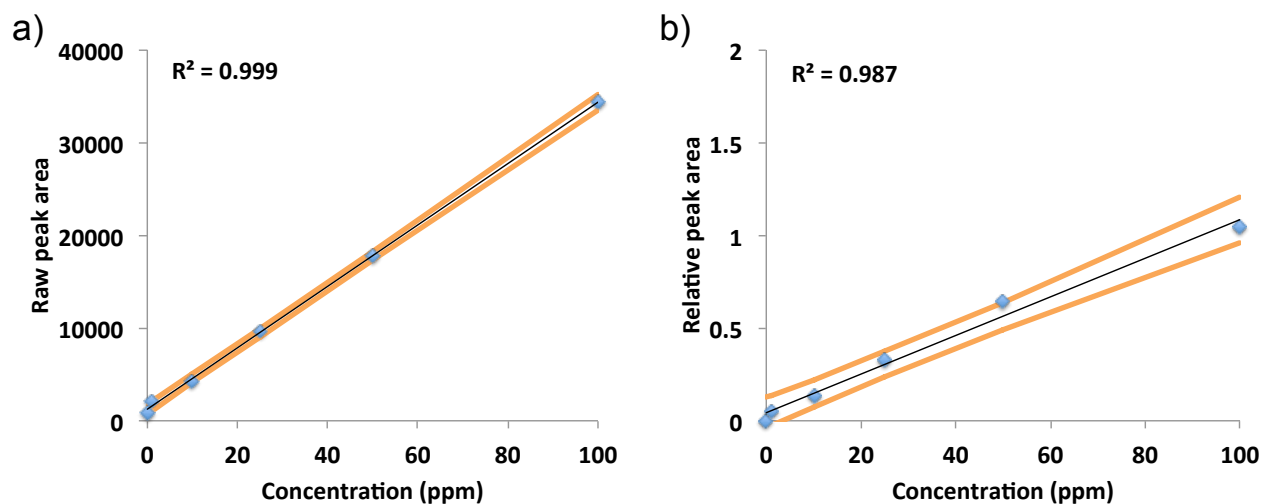


Figure S-3. Calibration curves generated from the peak area of the tandem mass spectrum of a) raw methamphetamine signal and b) the ratio of raw methamphetamine peak area to the raw peak area of the deuterated methamphetamine. Each calibration curve is shown with the 95% confidence interval of the linear regression line.

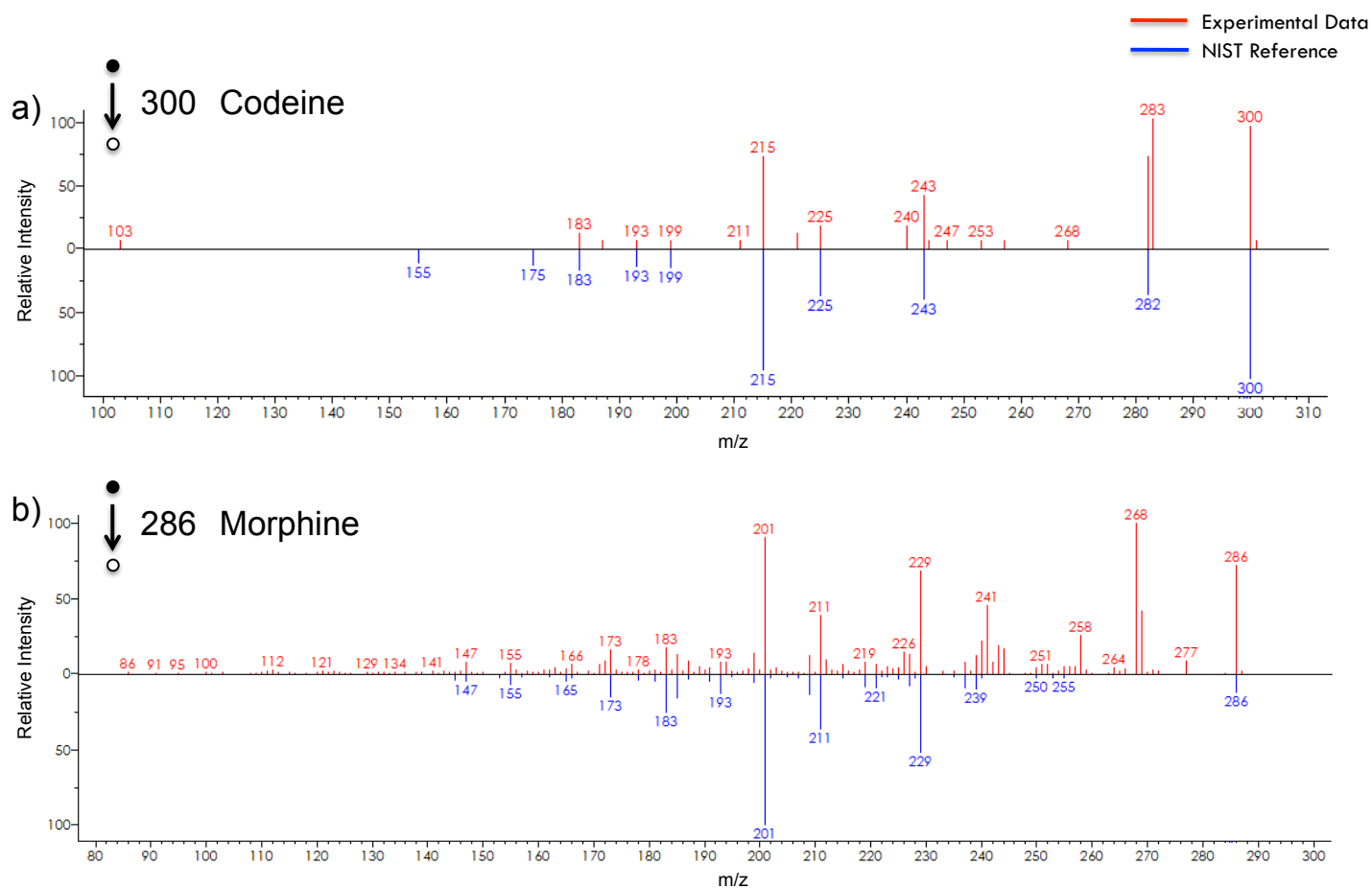
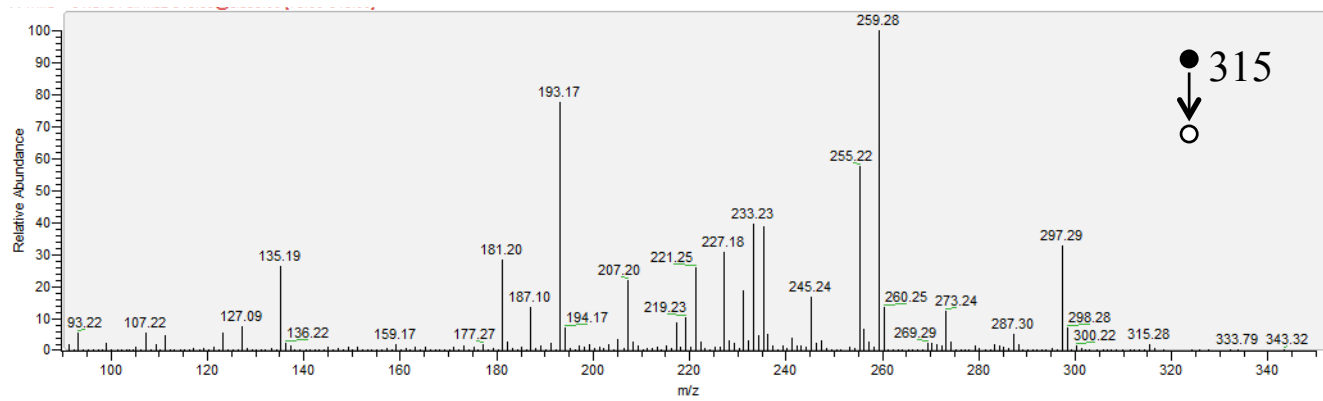


Figure S-4. Head-to-tail comparison of the tandem MS spectra obtained directly from human hair a) of codeine at ~ 7 ng/mg (precursor m/z 300) and b) morphine at ~ 12 ng/mg hair (precursor m/z 286). In each spectrum, the experimental data is shown in red while the NIST reference is shown in blue.

a)



b)

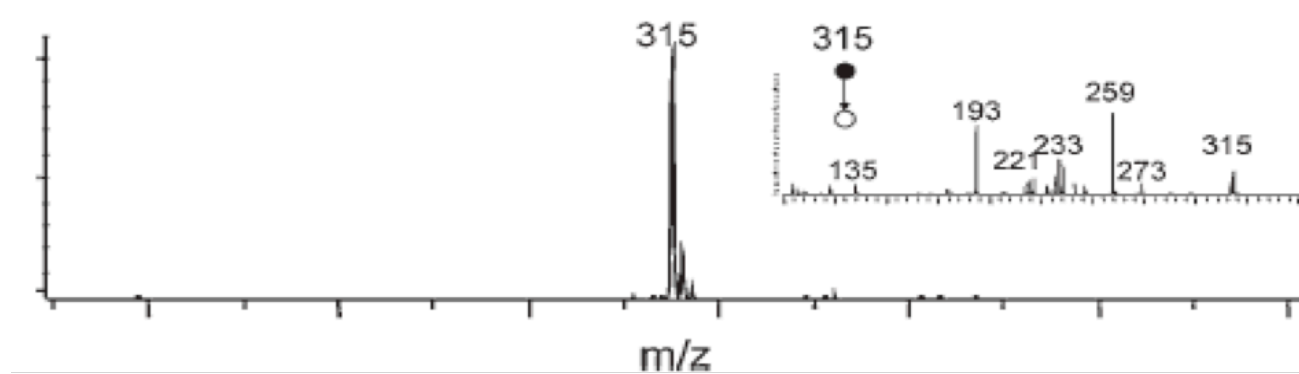


Figure S-5. MS/MS data for the analysis of THC in a cannabis leaf a) with LAESI and b) with DAPPI. (Reprinted with permission from reference 54.)

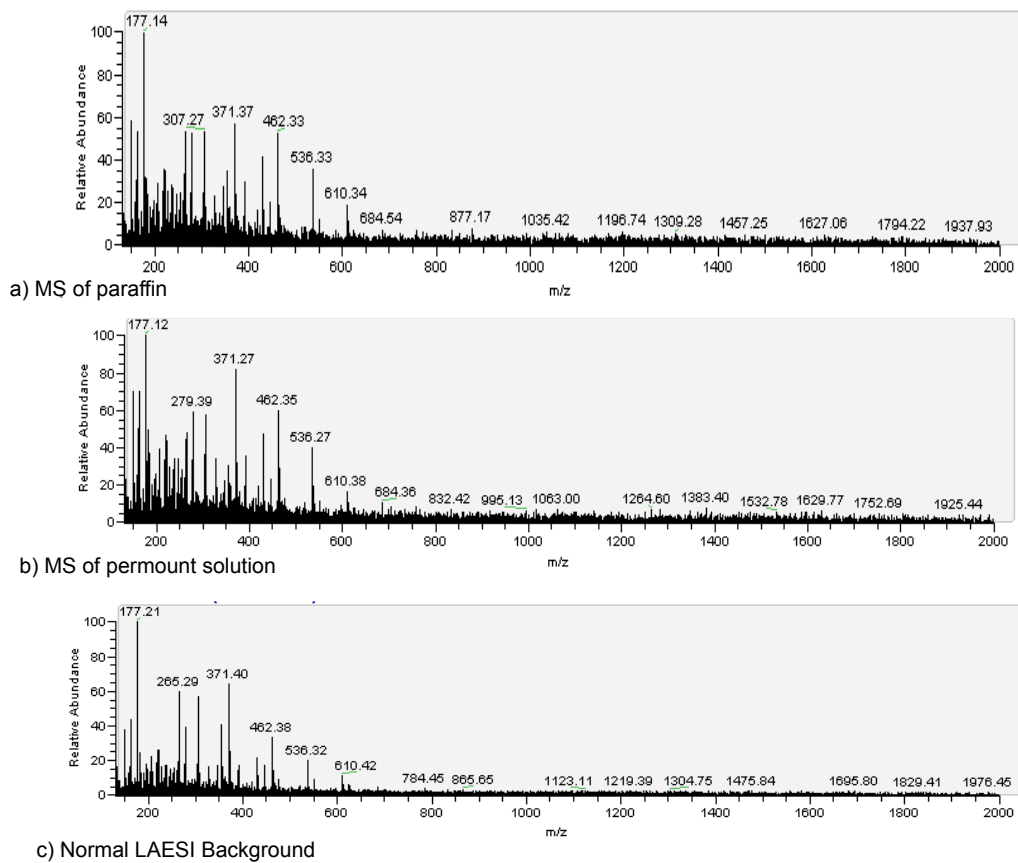


Figure S-6. The comparison of a) the MS data for paraffin wax and b) the MS data for permuto solution with c) the typical background obtained during a LAESI analysis.

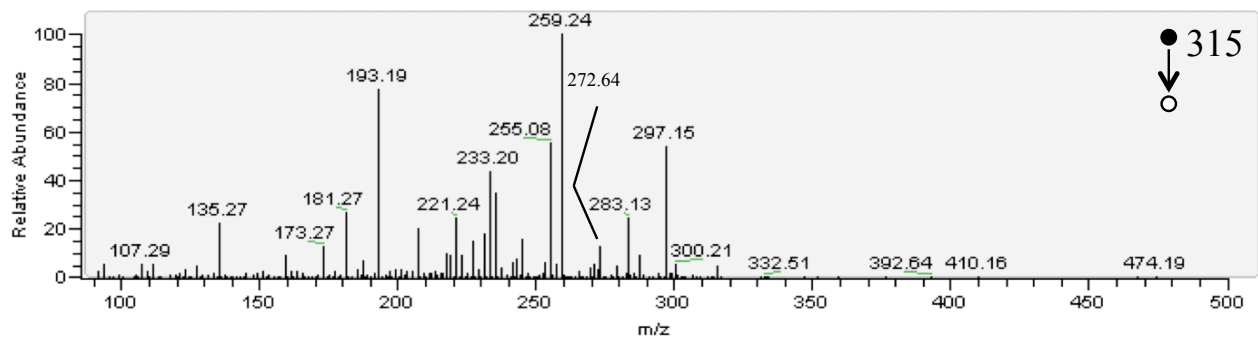


Figure S-7. MS/MS data for the analysis of THC in a cannabis leaf mounted using paraffin wax with LAESI.