

## Supplementary Information

### Combining Presumptive Color Tests, Pressure-Sensitive Adhesive-Based Collection, and Paper Spray-Mass Spectrometry for Illicit Drug Detection

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Table S1. Benchtop Mass Spectrometer parameters for MS and MS/MS method and subsequent analysis

<b>Analyte</b>	<b>Molecular Weight (g/mol)</b>	<b>Precursor Ion (<i>m/z</i>)</b>	<b>Product Ion (<i>m/z</i>)</b>	<b>Collision Energy (eV)</b>	<b>Deuterated Standard</b>
Cocaine	303.25	304.25	182	35	D3
Methamphetamine	369.42	150.08	119	50	D11
Heroin	149.23	370.25	268	30	D9

Table S2. Portable Mass Spectrometer parameters for MS and MS/MS method and subsequent analysis

<b>Analyte</b>	<b>Precursor Ion (<i>m/z</i>)</b>	<b>Detector Anode (V)</b>	<b>RF Level (V)</b>	<b>ISO Freq. Center (kHz)</b>	<b>CID Level (V)</b>
Cocaine	304	-1450	150	76	0.65
Methamphetamine	150	-1450	150	160	0.75
Heroin	370	-1600	250	73.3	0.75

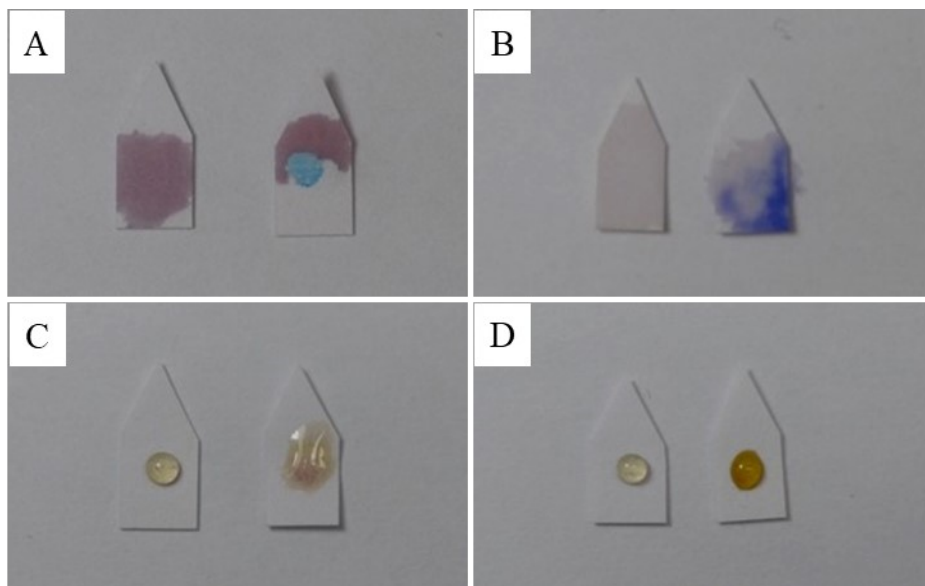


Figure S1. Comparison of reagent blanks (left) and positive color tests (right) on PSA-lined paper, A) Cobalt thiocyanate test with and without 10  $\mu\text{g}$  of cocaine HCl, B) Simon test with and without 10  $\mu\text{g}$  of methamphetamine, C) Marquis test with and without 10  $\mu\text{g}$  of street purity heroin, and D) Marquis test with and without 10  $\mu\text{g}$  of methamphetamine.

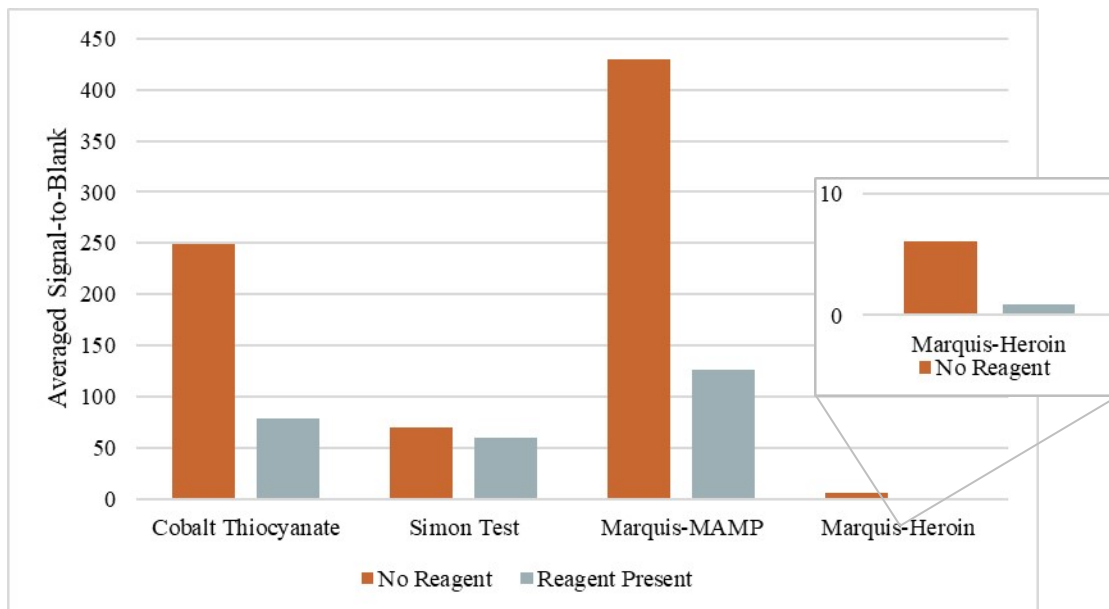


Figure S2. Averaged signal-to-blank ratio at threshold amount of analyte with and without color test reagent

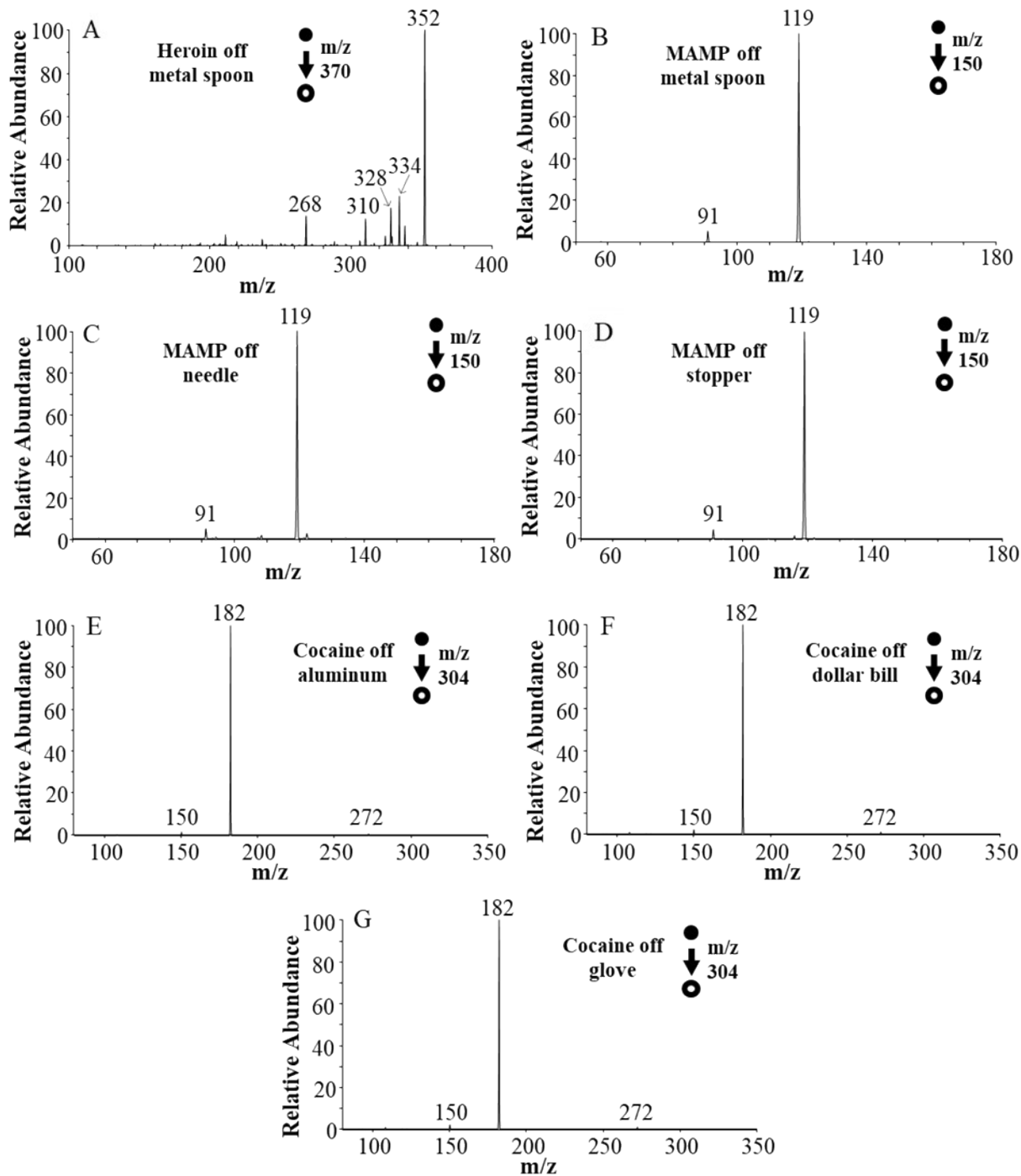


Figure S3. Representative MS/MS spectra of realistic sampling procedures immediately following color testing on benchtop MS, (A) Heroin recovered off metal spoon, (B) Methamphetamine recovered off metal spoon, (C) Methamphetamine recovered off needle, (D) Methamphetamine recovered off syringe stopper, (E) Cocaine recovered off aluminum surface, (F) Cocaine recovered off dollar bill, and (G) Cocaine recovered off glove wiped across the surface of the bill.