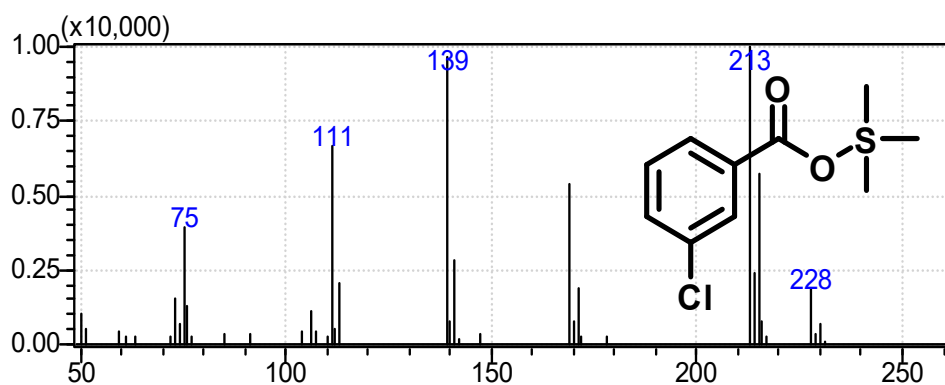




## Supplementary Materials

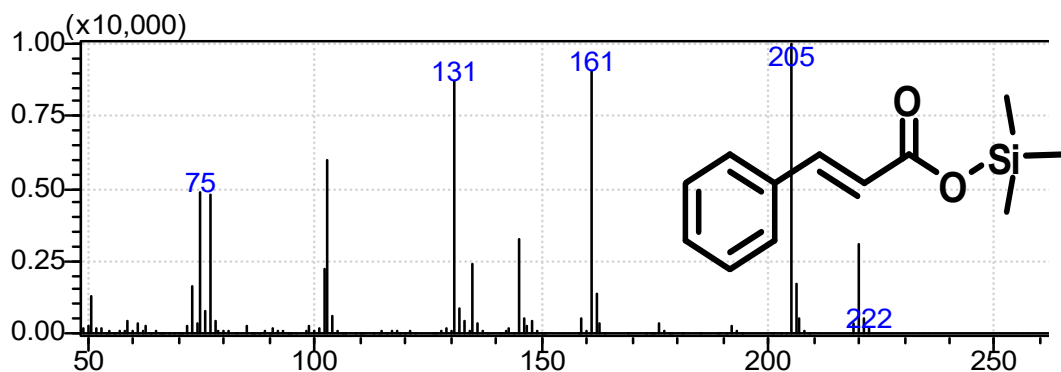
### Target, suspect and non-target screening of silylated derivatives of polar compounds based on single ion monitoring GC-MS

Chlorobenzoic acid



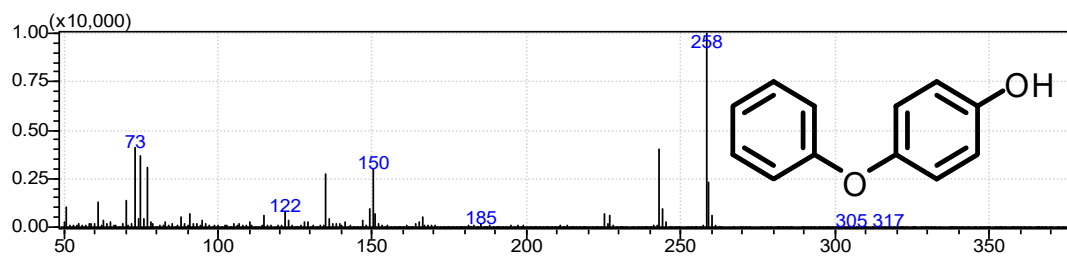
**Figure S1.** Spectrum of derivatized chlorobenzoic acid. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

Cinnamic acid



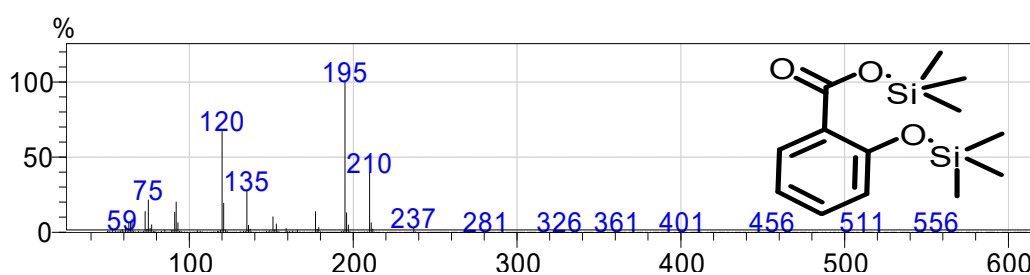
**Figure S2.** Spectrum of derivatized cinnamic acid. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

4-Phenoxyphenol was used as an internal standard.



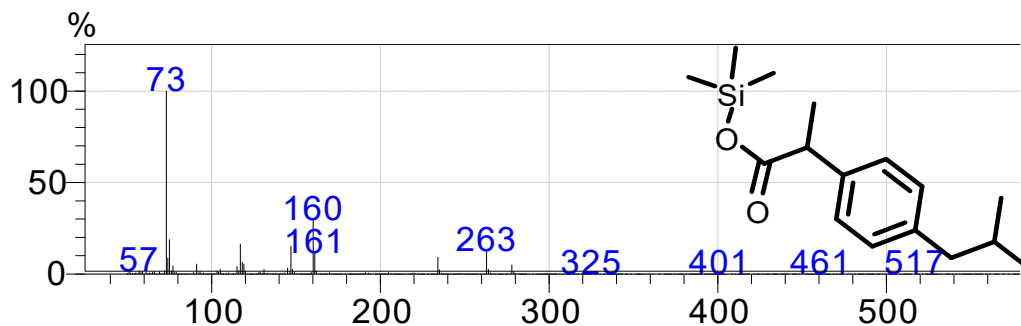
**Figure S3.** Spectrum of derivatized 4-phenoxyphenol. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

Acetylsalicylic acid (aspirin)



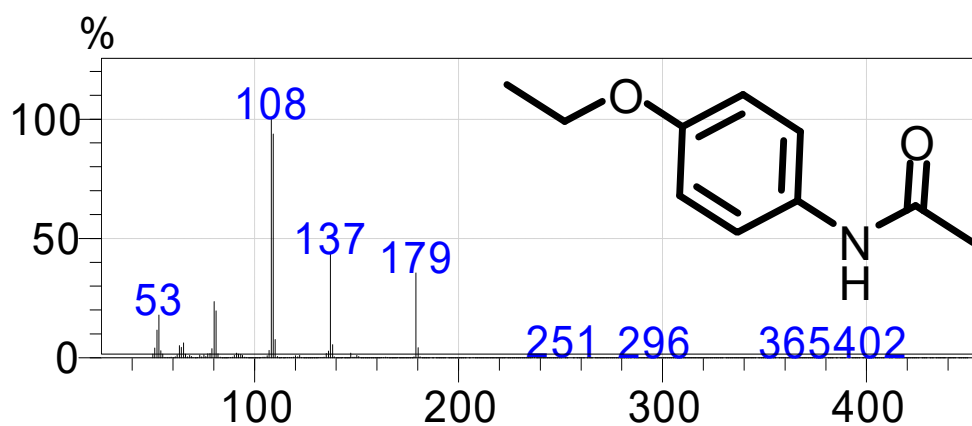
**Figure S4.** Spectrum of derivatized acetylsalicylic acid. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

Ibuprofen



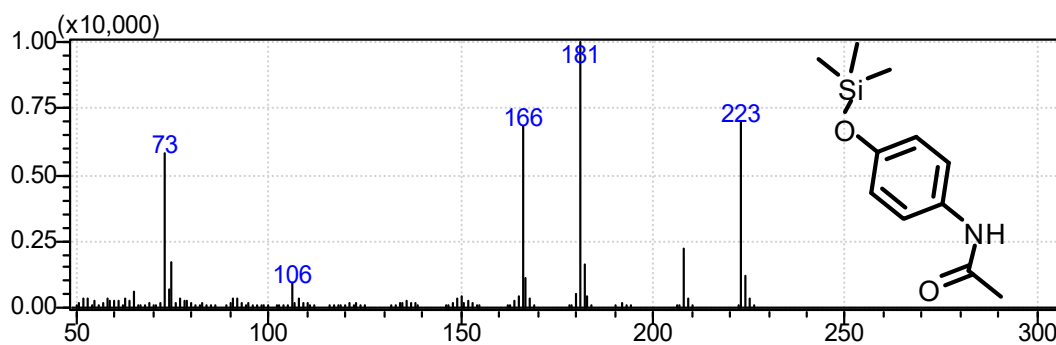
**Figure S5.** Spectrum of derivatized ibuprofen. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

Phenacetin



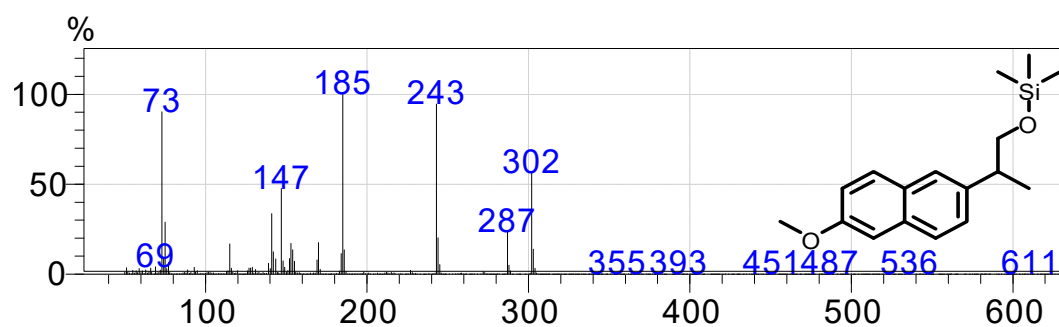
**Figure S6.** Spectrum of phenacetin. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

### Acetaminophen



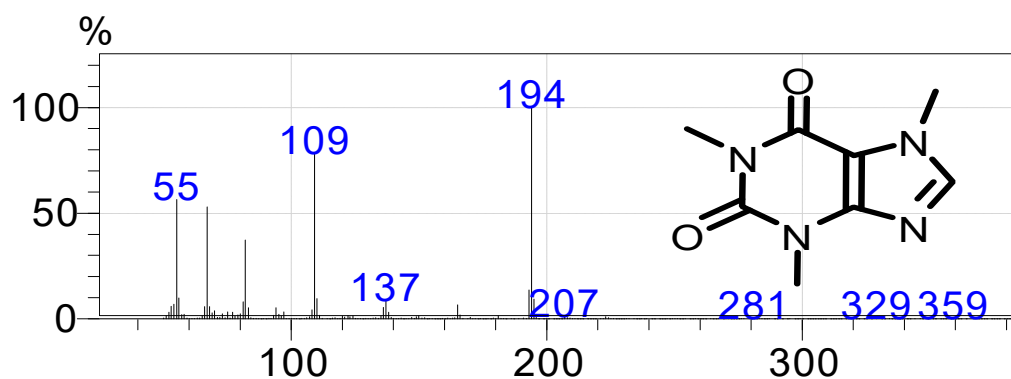
**Figure S7.** Spectrum of derivatized acetaminophen. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

### Naproxen



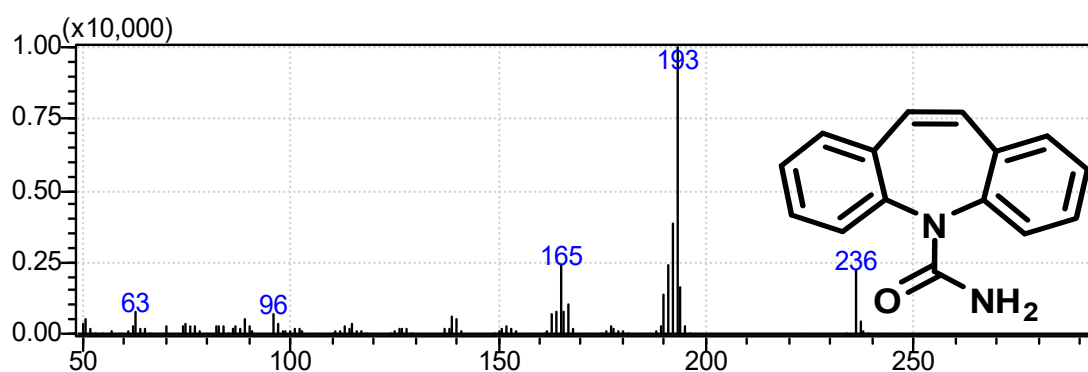
**Figure S8.** Spectrum of derivatized acetaminophen. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

## Caffeine



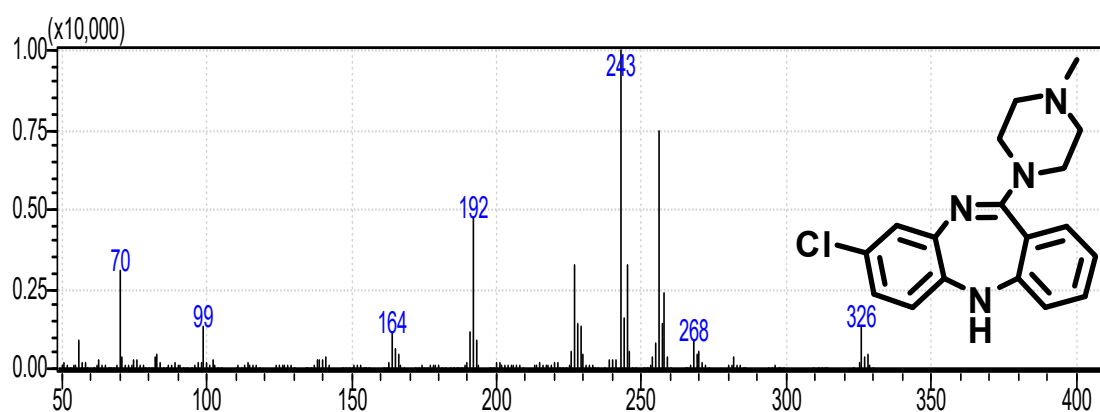
**Figure S9.** Spectrum of caffeine. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Carbamazepine



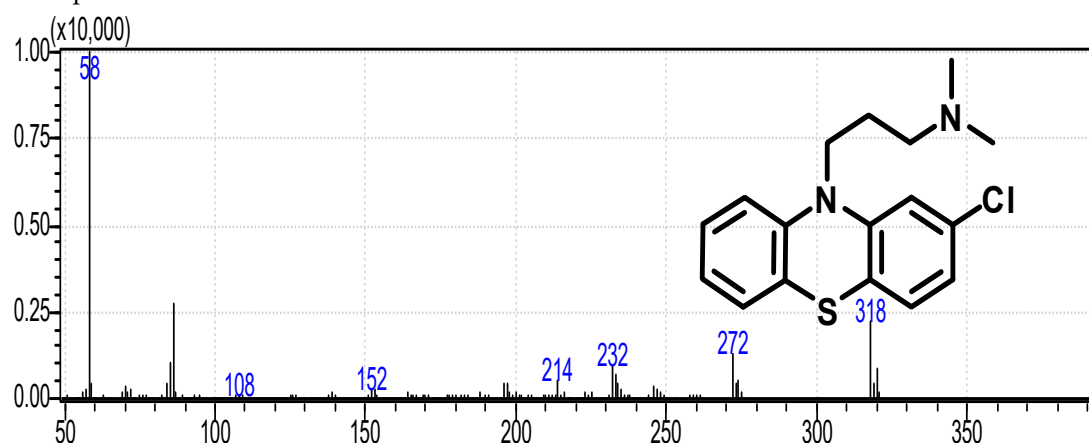
**Figure S10:** Spectrum of derivatized carbamazepine. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Clozapine



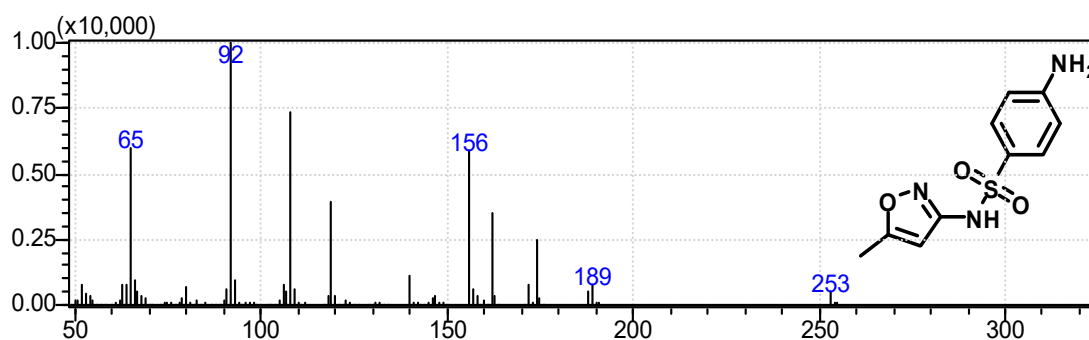
**Figure S11.** Spectrum of derivatized clozapine. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Chlorpromazine



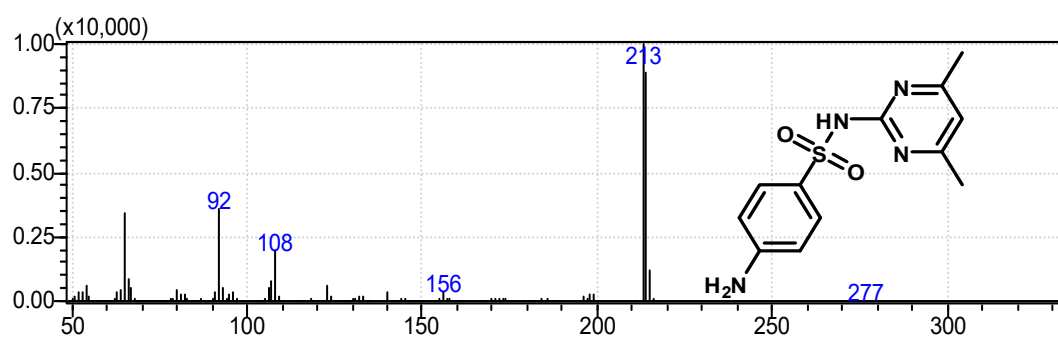
**Figure S12.** Spectrum of derivatized chlorpromazine. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Sulfamethoxazole



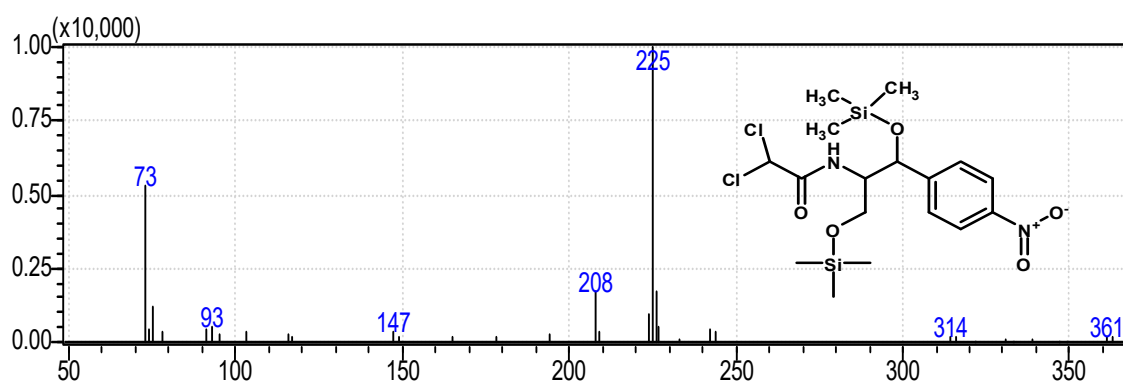
**Figure S13.** Spectrum of sulfamethoxazole. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Sulfamethazine



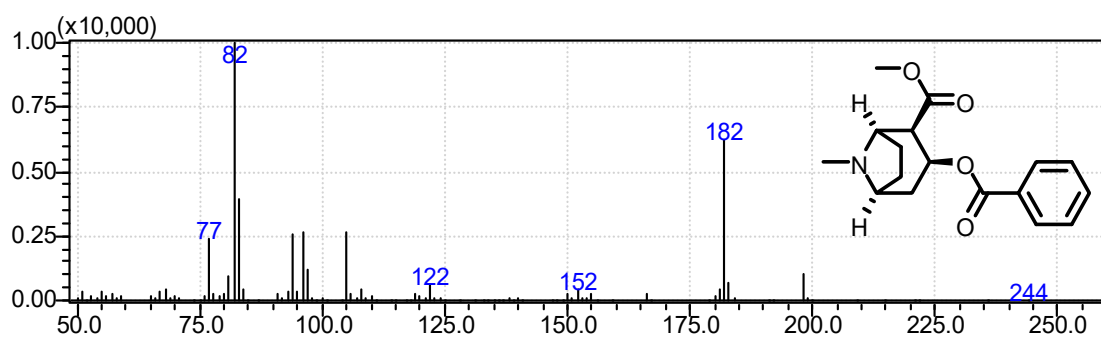
**Figure S14.** Spectrum of sulfamethazine. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Chloramphenicol



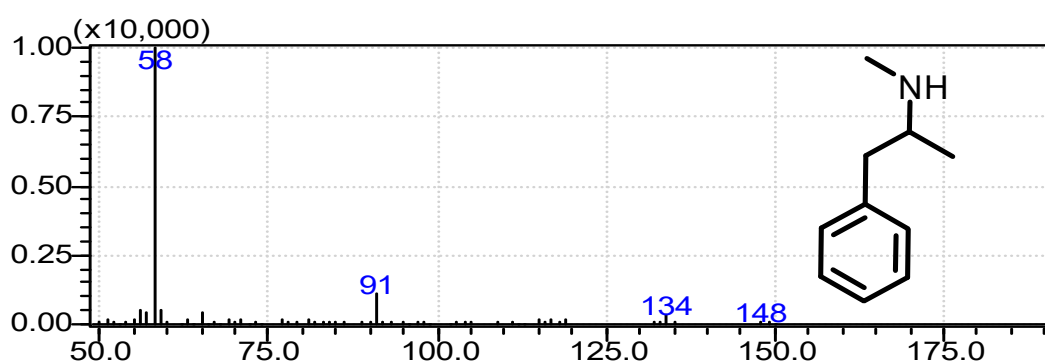
**Figure S15.** Spectrum of derivatized chloramphenicol. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization.

## Cocaine



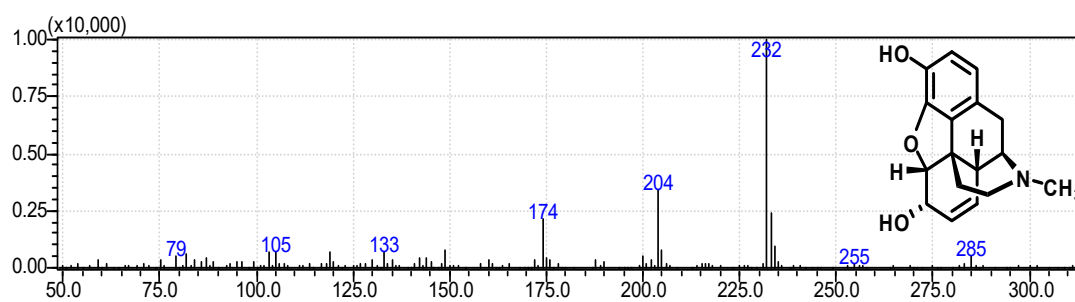
**Figure S16.** Spectrum of cocaine. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Methamphetamine



**Figure S17.** Spectrum of methamphetamine. Obtained by injecting 2  $\mu$ L of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.

## Morphine



**Figure S18.** Spectrum of morphine. Obtained by injecting 2  $\mu\text{L}$  of standard solution into GC-MS after derivatization. The lack of the silyl group indicated that this compound was not be derivatized.