

**Supplementary Table S1. Raw Data for Linearity Assessment of  $\Delta^9$ -THC and  $\Delta^8$ -THC**

| Concentration (ng/mL) | $\Delta^9$ -THC peak area | $\Delta^8$ -THC peak area | IS peak area       | $\Delta^9$ -THC/IS | $\Delta^8$ -THC/IS |
|-----------------------|---------------------------|---------------------------|--------------------|--------------------|--------------------|
| 1                     | 0                         | 0                         | $1.73 \times 10^8$ | 0                  | 0                  |
| 1                     | 0                         | 0                         | $1.64 \times 10^8$ | 0                  | 0                  |
| 5                     | $8.00 \times 10^6$        | $4.99 \times 10^6$        | $1.67 \times 10^8$ | 0.048              | 0.030              |
| 5                     | $8.31 \times 10^6$        | $7.26 \times 10^6$        | $1.67 \times 10^8$ | 0.050              | 0.044              |
| 10                    | $1.73 \times 10^7$        | $1.53 \times 10^7$        | $1.64 \times 10^8$ | 0.105              | 0.093              |
| 10                    | $1.73 \times 10^7$        | $1.42 \times 10^7$        | $1.66 \times 10^8$ | 0.104              | 0.086              |
| 50                    | $8.38 \times 10^7$        | $6.94 \times 10^7$        | $1.58 \times 10^8$ | 0.530              | 0.439              |
| 50                    | $8.48 \times 10^7$        | $6.86 \times 10^7$        | $1.62 \times 10^8$ | 0.523              | 0.423              |
| 100                   | $1.82 \times 10^8$        | $1.41 \times 10^8$        | $1.66 \times 10^8$ | 1.100              | 0.849              |
| 100                   | $1.82 \times 10^8$        | $1.40 \times 10^8$        | $1.68 \times 10^8$ | 1.080              | 0.833              |
| 500                   | $8.67 \times 10^8$        | $6.91 \times 10^8$        | $1.51 \times 10^8$ | 5.740              | 4.580              |
| 500                   | $8.68 \times 10^8$        | $6.45 \times 10^8$        | $1.48 \times 10^8$ | 5.860              | 4.360              |
| 1000                  | $1.73 \times 10^9$        | $1.32 \times 10^9$        | $1.44 \times 10^8$ | 12.00              | 9.170              |
| 1000                  | $1.75 \times 10^9$        | $1.33 \times 10^9$        | $1.45 \times 10^8$ | 12.10              | 9.170              |

Raw data of  $\Delta^9$ -THC and  $\Delta^8$ -THC peak area, IS ( $\Delta^9$ -THC- $d_3$ , 100 ng/mL) peak area,  $\Delta^9$ -THC to IS ratio and  $\Delta^8$ -THC to IS ratio obtained for each calibration standard (1-1000 ng/mL).

IS, internal standard; THC, tetrahydrocannabinol.

**Supplementary Table S2. Linearity Parameters of  $\Delta^9$ -THC and  $\Delta^8$ -THC**

| Compound        | Slope                              | Intercept              | $R^2$  |
|-----------------|------------------------------------|------------------------|--------|
| $\Delta^9$ -THC | $0.01203 \pm 6.674 \times 10^{-5}$ | $-0.05967 \pm 0.02834$ | 0.9996 |
| $\Delta^8$ -THC | $0.00916 \pm 4.800 \times 10^{-5}$ | $-0.03151 \pm 0.02038$ | 0.9997 |

Slope and intercept values (mean  $\pm$  SD) and coefficient of determination ( $R^2$ ) for  $\Delta^9$ -THC and  $\Delta^8$ -THC.

SD, standard deviation.