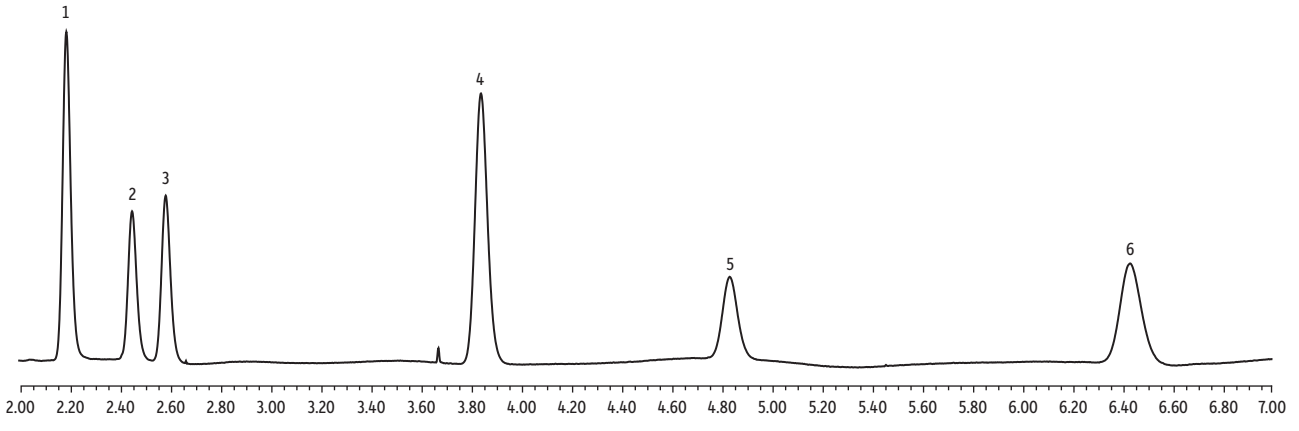
## Blank Chocolate Spiked with Six Cannabinoids (0.2 mg/g) on Raptor ARC-18

- **Quantify cannabinoids relevant to California regulations in chocolate.**
- **Reduced solvent use compared to traditional methods on larger columns.**




LC_GN0673

| Peaks | $t_R$ (min) | Conc. (µg/mL)* |
|---|---|---|
| 1. Cannabidiolic acid (CBDA) | 2.18 | 3.33 |
| 2. Cannabigerol (CBG) | 2.44 | 3.33 |
| 3. Cannabidiol (CBD) | 2.58 | 3.33 |
| 4. Cannabinol (CBN) | 3.83 | 3.33 |
| 5. Delta-9-Tetrahydrocannabinol (Δ9-THC) | 4.83 | 3.33 |
| 6. Tetrahydrocannabinolic acid A (THCA-A) | 6.42 | 3.33 |

*Extract from a chocolate sample initially spiked at 0.2 mg/g.

| | |
|---|---|
| **Column** | Raptor ARC-18 (cat.# 9314A62) |
| Dimensions: | 150 mm x 2.1 mm ID |
| Particle Size: | 2.7 µm |
| Pore Size: | 90 Å |
| Guard Column: | Raptor ARC-18 5 mm, 2.1 mm ID, 2.7 µm (cat.# 9314A0252) |
| Temp.: | 30 °C |
| **Standard/Sample** | Cannabinoids standard (cat.# 34014)<br>Cannabigerol (cat.# 34091)<br>d9-Tetrahydrocannabinol (cat.# 34067)<br>d9-Tetrahydrocannabinolic acid A (cat.# 34111) |
| Diluent: | 75:25 Acetonitrile:water |
| Conc.: | Expected concentration of 3.33 ppm in final extract from chocolate initially spiked at 0.2 mg/g. |
| Inj. Vol.: | 2 µL |
| **Mobile Phase** | |
| A: | Water, 5 mM ammonium formate, 0.1% formic acid |
| B: | Acetonitrile, 0.1% formic acid |

| Time (min) | Flow (mL/min) | %A | %B |
|---|---|---|---|
| 0.00 | 0.4 | 25 | 75 |
| 10.00 | 0.4 | 25 | 75 |

| | |
|---|---|
| **Detector** | UV/Vis @ 228 nm |
| **Instrument** | UHPLC |
| **Sample Preparation** | Chocolate was pulverized using a SPEX Freezer/Mill grinder, and a 0.5 g sample was fortified with cannabinoids at 0.2 mg/g. Then, 0.5 mL of isopropyl alcohol was added to the sample. The sample was vortexed for 10 sec or until a homogenous mixture was obtained. Afterwards, 2.5 mL of acetonitrile acidified with acetic acid at 1% v/v was added to the vial. Once again, the mixture was vortexed for 30 sec, and then centrifuged for 5 min at 4300 ×g at room temperature. 100 µL of chocolate extract was mixed with 900 µL of 75:25 acetonitrile:water, and the final mix was centrifuged for 10 min at 4 °C. 2 µL of final extract was injected into the HPLC-UV system. |