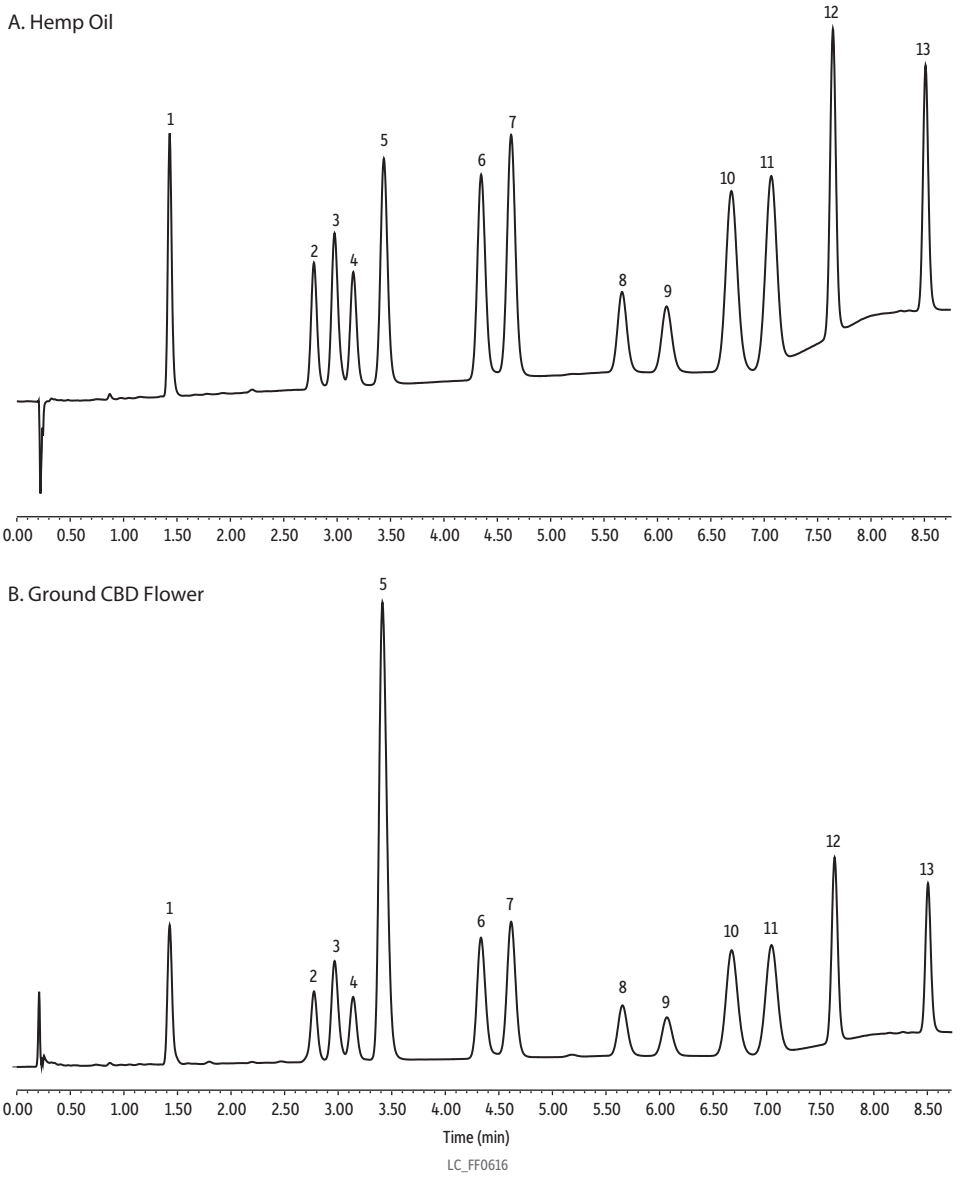
Potency Method for 13 Cannabinoids in Matrix on 50 x 3 mm, 2.7 µm Raptor ARC-18



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	Peaks	t_R (min)
1.	Cannabidivarin (CBDV)	1.436
2.	Cannabidiol (CBD)	2.790
3.	Cannabigerol (CBG)	2.984
4.	Tetrahydrocannabivarin (THCV)	3.159
5.	Cannabidiolic acid (CBDA)	3.447
6.	Cannabigerolic acid (CBGA)	4.359
7.	Cannabinol (CBN)	4.638
8.	Δ9-Tetrahydrocannabinol (Δ9-THC)	5.678
9.	Δ8-Tetrahydrocannabinol (Δ8-THC)	6.095
10.	(6aR,9S)-delta-10-Tetrahydrocannabinol ((6aR,9S)-Δ-10-THC)	6.703
11.	(6aR,9R)-delta-10-Tetrahydrocannabinol ((6aR,9R)-Δ-10-THC)	7.076
12.	Cannabichromene (CBC)	7.648
13.	δ-9-Tetrahydrocannabinolic acid-a (THCA-A)	8.515

Column	Raptor ARC-18 (cat.# 9314A5E)
Dimensions:	50 mm x 3.0 mm ID
Particle Size:	2.7 µm
Pore Size:	90 Å
Guard Column:	Raptor ARC-18 EXP guard column cartridge 5 mm, 3.0 mm ID, 2.7 µm (cat.# 9314A0253)
Temp.:	50 °C

Standard/Sample	Cannabidiol (CBD) (cat.# 34011) Cannabidiolic acid (CBDA) (cat.# 34094) d9-Tetrahydrocannabinol (d9-THC) (cat.# 34067) d8-Tetrahydrocannabinol (d8-THC) (cat.# 34090) d9-Tetrahydrocannabinolic acid A (THCA-A) (cat.# 34111) Cannabidivarin (CBDV) (cat.# 34123) Cannabigerol (CBG) (cat.# 34091) Tetrahydrocannabivarin (THCV) (cat.# 34100) Cannabigerolic acid (CBGA) (cat.# 34135) Cannabinol (CBN) (cat.# 34010) Cannabichromene (CBC) (cat.# 34092) Compounds not present in these mixes were obtained separately.
Diluent:	25:75 Water:acetonitrile
Conc.:	50 ppm
Inj. Vol.:	3 µL
Mobile Phase	
A:	Water, 5 mM ammonium formate, 0.1% formic acid
B:	Methanol, 0.1% formic acid

Time (min)	Flow (mL/min)	%A	%B
0.00	1	35	65
5.00	1	30	70
6.50	1	30	70
7.50	1	20	80
8.50	1	20	80
8.51	1	35	65
10.00	1	35	65

Detector	UV/Vis @ 228 nm
Flow Cell Size:	500 nL
Instrument	Waters ACQUITY UPLC H-Class
Sample Preparation	A. Hemp oil was prepared by aliquoting 50 µL of oil and adding 950 µL of acetonitrile. After vortexing for 30 seconds, 750 µL were transferred to a vial and 250 µL of water were added. The sample was vortexed, a 20-fold dilution was performed, and analytes were spiked at 50 ppm. B. Ground CBD flower was prepared by weighing 500 mg in a centrifuge tube and extracting with 10 mL of 80:20 methanol:water. Samples were vortexed for 15 seconds and sonicated for 5 minutes (3 cycles) and then centrifuged at 4000 rpm for 5 minutes. Supernatant was diluted 50-fold and all analytes were spiked at 50 ppm, except CBDA which was measured at endogenous levels. All samples were prepared in a 2 mL vial (cat.# 21142) and capped with a short screw cap (cat.# 24498).