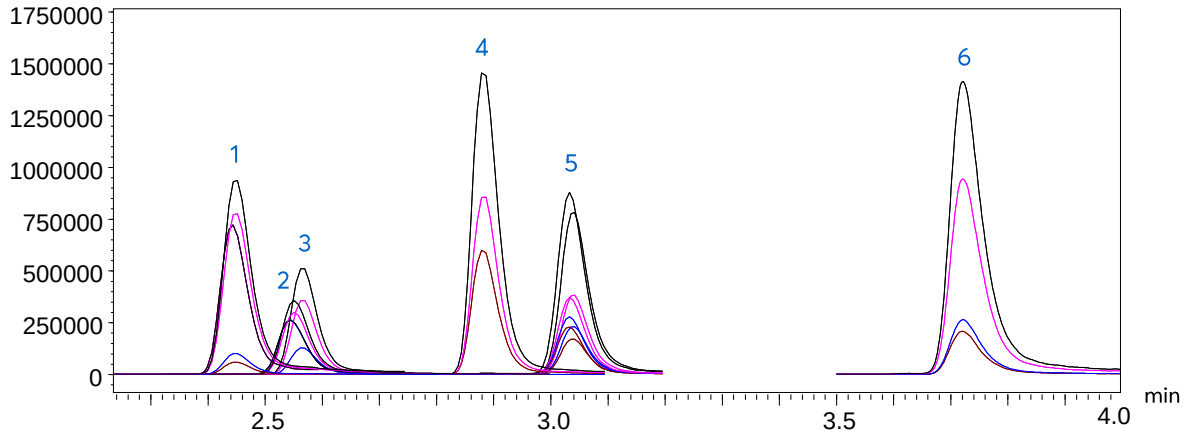
Chromatography Solutions

Application note #7070

Low Level Determination of Cannabis Use from Hair Samples



1. 11-Hydroxy-Δ^9-tetrahydrocannabinol (THC-OH)
2. 11-Nor-9-carboxy-Δ^9-Tetrahydrocannabinol (THC-COOH)
3. Cannabidiol (CBD)
4. Cannabinol (CBN)
5. Tetrahydrocannabinol (THC)
6. Δ^9-Tetrahydrocannabinolic acid-A (THCA-A)

Avantor® ACE®

Method Details

CONDITIONS

Column: ACE Excel 1.7 C18

Dimensions: 50 x 2.1 mm

Mobile Phase: A: 0.01 % Acetic acid in H_2O

B: 0.01 % Acetic acid in MeOH

Gradient:

Time (mins)	%B
0.00	50
0.50	80
2.00	90
4.00	90
4.01	50

Flow Rate: 0.3 mL/min

Injection: 5 µL

Temperature: 50 °C

Detection: Shimadzu 8060 Triple Quad MS

MRM, positive and negative ESI mode

Sample: THC and metabolites extracted from human hair using matrix micro pulverization and clean up with supported liquid extraction prior to LC/MS-MS analysis

MS CONDITIONS

Peak	Analyte	Rt (Mins)	MRM Transitions	Ion Mode
1	11-Hydroxy-Δ^9-tetrahydrocannabinol (THC-OH)	2.44	331.0 > 313.3	+
2	11-Nor-9-carboxy-Δ^9-Tetrahydrocannabinol (THC-COOH)	2.55	343.3 > 299.3	-
3	Cannabidiol (CBD)	2.56	313.2 > 245.15	-
4	Cannabinol (CBN)	2.88	311.0 > 223.0	+
5	Tetrahydrocannabinol (THC)	3.05	315.0 > 193.1	+
6	Δ^9-Tetrahydrocannabinolic acid-A (THCA-A)	3.71	357.3 > 313.3	-

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ORDERING TABLE

Product	Details	Size	Part Number
ACE Excel 1.7 C18	UHPLC Column	50 x 2.1 mm	EXL-171-0502U