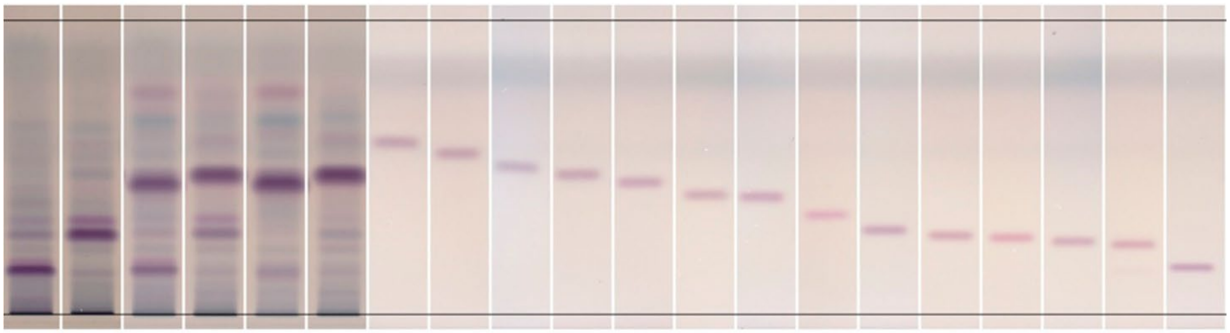
Cannabis Species Inflorescence – Identification

High-Performance Thin-Layer Chromatography



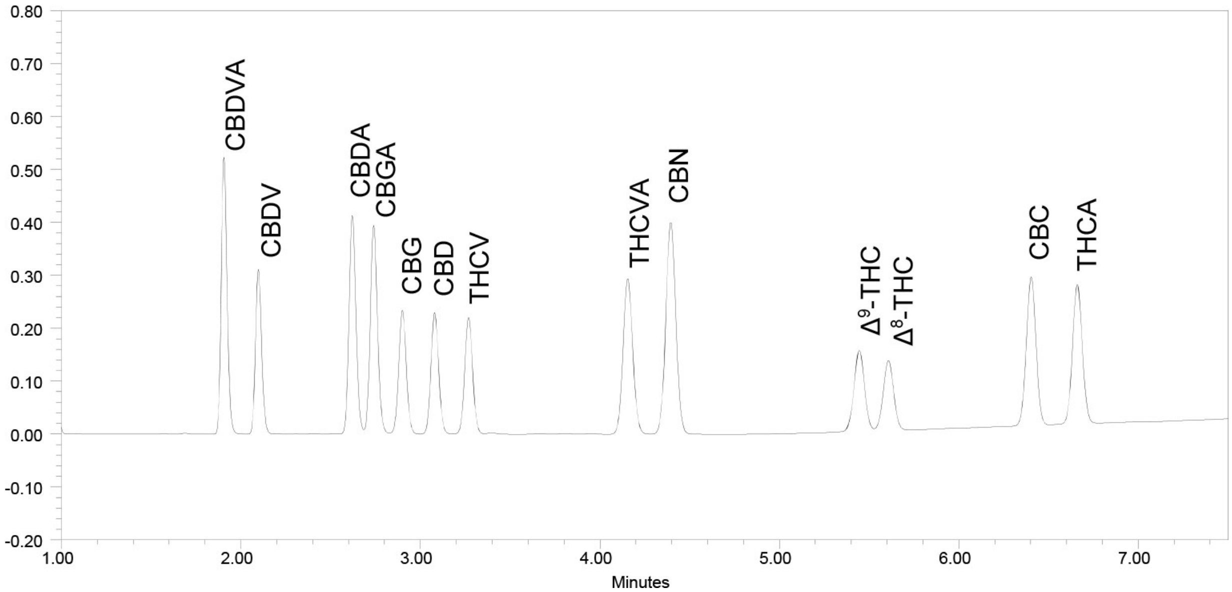
Typical HPTLC Chromatogram

These chromatograms are supplied for information only

Track assignment: 1: THC-dominant cannabis; 2: decarboxylated THC-dominant cannabis; 3: THC/CBD-intermediate cannabis; 4: decarboxylated THC/CBD intermediate cannabis; 5: CBD-dominant cannabis; 6: decarboxylated CBD-dominant cannabis; 7: CBDV; 8: CBDVA; 9: CBG; 10: CBD; 11: CBDA;12: THCV; 13: CBGA; 14: CBN; 15: Δ^9-THC; 16: Δ^8-THC; 17: CBL; 18: THCVA; 19: CBC; 20: Δ^9-THCA.

Solution preparation:	according to the monograph
Plate:	HPTLC, Si 60-RP 18 F254, 5 µm
Application volume: bands	2 µL for standard solution and sample solution, as 8-mm
Relative Humidity:	about 33%
Developing solvent system:	methanol, water, and glacial acetic acid (80:10:10)
Developing distance:	6 cm
Detection:	treat with vanillin-sulfuric acid, heat at 100° for 3 min, and examine under white light

HPLC (Cannabinoids)



Representative chromatogram of Content of Cannabinoids in *Cannabis* Species Inflorescence

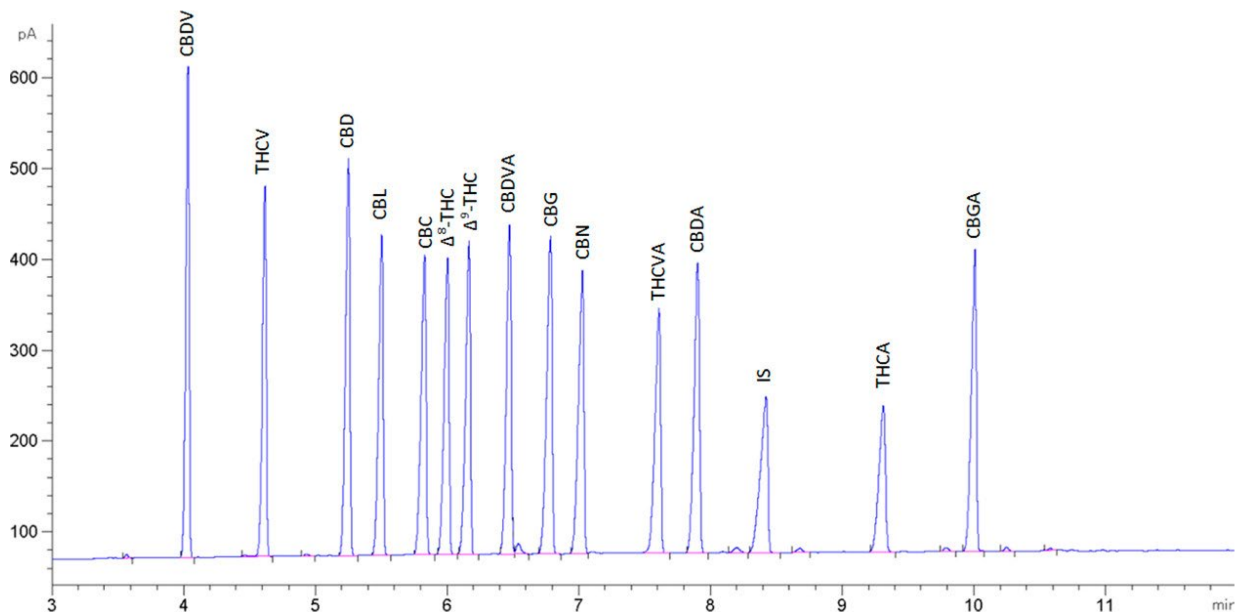
This chromatogram is supplied for information only

Solution preparation:	according to the monograph
Mode:	LC
Detector:	UV, 222 nm
Column:	4.6-mm × 15-cm; 2.7 µm packing L1 (similar to Restek Raptor ARC-18 HPLC Column, RP-18)
Flow rate:	1.5 mL/min
Injection volume:	5 µL
Solution A:	0.1% formic acid (98%) in water
Solution B:	0.1% formic acid (98%) in acetonitrile
Mobile phase:	see *Table 1*

Table 1

Time (min)	Solution A (%)	Solution B (%)
0	26	74
3.5	26	74
6.5	15	85
7.0	15	85
7.01	26	74
8.5	26	74

GC



Representative chromatogram of Content of Cannabinoids in *Cannabis* Species Inflorescence

This chromatogram is supplied for information only

Solution preparation:	according to the monograph
Detector:	Flame ionization (FID)
Column:	0.25-mm × 15-m fused silica capillary; coated with 0.25-µm film of phase G2 (Agilent DB-1ms or similar)

Temperature

Injector port: 275°

Detector: 300°

Column: Table 2

Table 2

Initial Temperature (°)	Temperature Ramp (°/min)	Final Temperature (°)	Hold Time at Final Temperature (min)
190	-	190	1
190	30	230	2
230	5	250	1
250	20	300	2.75
190	-	190	2.95

Carrier gas: helium (He)

Flow rate: 0.8 mL/min

Injection volume: 3 µL

Mode: Split injection, 20:1