

# APPLICATIONS

## 18 Cannabinoids for Potency Testing By LC-UV

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### Overview

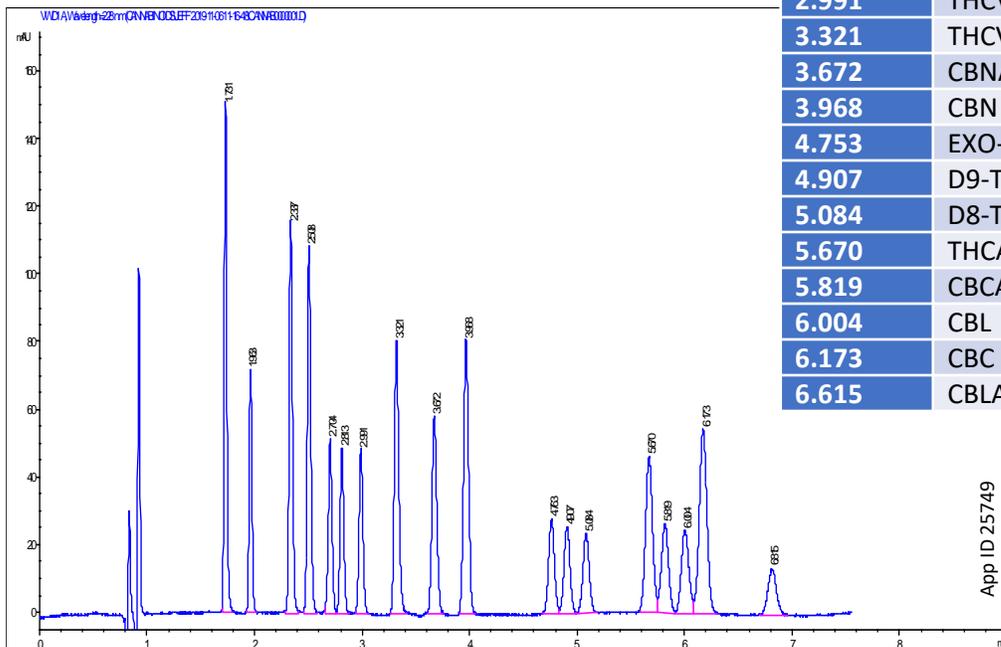
Legalization of medical and recreational marijuana and hemp have lead to an expansion of potency testing needs throughout the globe. Routine testing workflows are now benefiting from resolution of additional exotic cannabinoids to keep up with the diverse range of cultivars and formulations reaching the market.

Here we demonstrate a practical chromatographic separation of 18 cannabinoids with flexibility across HPLC and UHPLC platforms in a simple, isocratic workflow. While 5 primary cannabinoids, Δ9-THC, CBD, THCA, CBDA, and CBN are the most common and abundant, new indications are continuously being explored with dozens of other cannabinoids.

### LC-UV Conditions

- Column:** Kinetex® 2.6 μm C18
- Dimension:** 150 x 4.6mm
- Part No.:** [00F-4462-E0](#)
- Mobile Phase:** A: 20 mM Ammonium Formate, pH 2.9 with Formic Acid  
B: Acetonitrile
- Isocratic:** Isocratic 24:76 (A/B)
- Flow Rate:** 1.5 mL/min
- Injection Volume:** 2 μL
- Back Pressure:** ~260 bar
- Temperature:** 40 °C
- Detection:** UV @ 228 nm
- Analytes:** 18 Cannabinoids

Retention Time	Abbrev	Full Name
1.731	CBDVA	Cannabidivarinic acid
1.963	CBDV	Cannabidivarin
2.337	CBDA	Cannabidiolic acid
2.508	CBGA	Cannabigerolic acid
2.704	CBG	Cannabigerol
2.813	CBD	Cannabidiol
2.991	THCV	Tetrahydrocannabivarin
3.321	THCVA	Tetrahydrocannabivarinic acid
3.672	CBNA	Cannabinolic acid
3.968	CBN	Cannabinol
4.753	EXO-THC	Exo-tetrahydrocannabinol
4.907	D9-THC	Δ9-Tetrahydrocannabinol
5.084	D8-THC	Δ8-Tetrahydrocannabinol
5.670	THCA-A	Tetrahydrocannabinolic acid A
5.819	CBCA	Cannabichromenic acid
6.004	CBL	Cannabicycol
6.173	CBC	Cannabichromene
6.615	CBLA	Cannabicyclolic acid



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