

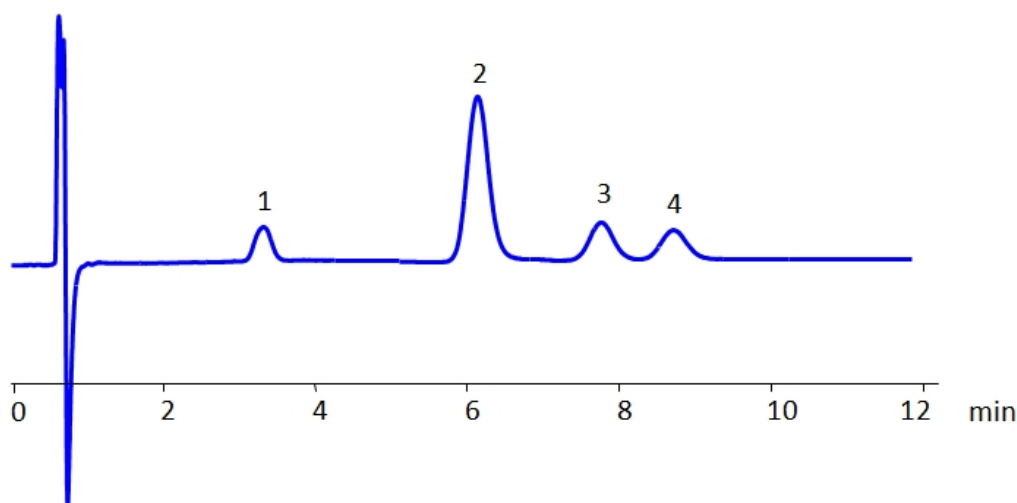
HPLC Separation of CBD, CBN, delta-9 THC, delta-8 THC on Cannsep C Column

<https://sielc.com/hplc-separation-of-cbd-cbn-delta-9-thc-delta-8-thc>

Chromatogram

Column:	Cannsep C
Column size:	2.1 x 100 mm, 5 µm
Mobile phase:	MeOH/H ₂ O - 82/18%
Buffer:	No
Flow rate:	0.5 mL/min
Detection:	UV 275 nm

1. Cannabidiol (CBD)
2. Cannabinol (CBN)
3. Delta-9-Tetrahydrocannabinol (THC)
4. Delta -8-Tetrahydrocannabinol (8-THC)



Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of CBD, CBN, delta-9 THC, delta-8 THC

Delta-8-Tetrahydrocannabinol, also known as delta-8-THC and Δ^8 -THC, is a psychoactive cannabinoid with the chemical formula $C_{21}H_{30}O_2$. It is less potent than delta-9-THC, it works in a similar way by binding to cannabinoid receptors in the brain. Its legality is dependent on the state. Delta-9-Tetrahydrocannabinol, also known as delta-9-THC and Δ^9 -THC, or simply THC, is the principal psychoactive constituent of Cannabis with the chemical formula $C_{21}H_{30}O_2$. In pharmaceutical contexts, it is referred to as dronabinol and is used in nabiximols, which helps alleviate neuropathic pain, spasticity, overactive bladder, and more. Medical use of THC is allowed in the majority of the states in the United States of America, with less than half having it be legal for recreational use.

Cannabidiol (CBD) is a phytocannabinoid with the chemical formula $C_{21}H_{30}O_2$. It is used in a variety of ways. Its only confirmed medical use is as epilepsy medication. It may help with pain, sleep, and addiction as an alternative to opioids, but due to limited clinical evidence, its regulations are dependent on the state. It is advised against using it during pregnancy due to unknown effects on fetal and infant development.

Cannabinol (CBN) is a mildly psychoactive phytocannabinoid with the chemical formula $C_{21}H_{26}O_2$. It was the first cannabinoid to be isolated from cannabis in the late 1800s. It is legal in the United States as long as the THC concentration is 0.3% or less. Little research has been done into its potential health benefits.

These cannabinoids can be detected in the low UV regime. Using a Cannsep C reverse-phase column and a mobile phase consisting of water and methanol (MeOH) with no buffer, CBD, CBN, delta-9 THC, and delta-8 THC can be separated, measured, and analyzed. This analysis method can be UV detected at 275 nm with high resolution.

Method Parameters

Mobile Phase	MeOH/H ₂ O – 82/18%
Buffer	No
Flow Rate	0.5 ml/min
Detection	UV, 275 nm
Class of Compounds	Drug, Hydrophilic, Ionizable, Supplements
Analyzing Compounds	Cannabidiol (CBD),Cannabinol (CBN),Delta-8-Tetrahydrocannabinol (8-THC),Delta-9-Tetrahydrocannabinol (THC)

HPLC Column Used

Cannsep C, 2.1 x 100 mm, 5 µm, 100 A, dual ended

[Order this column at hplc-shop.de →](#)