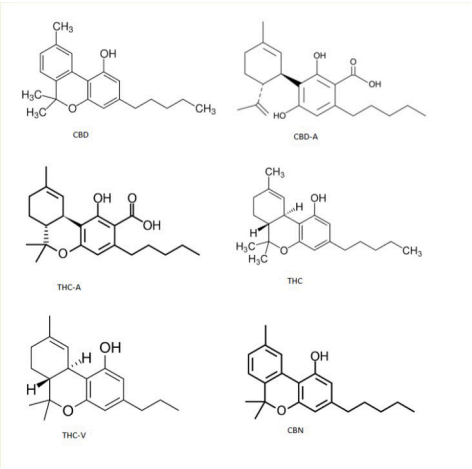
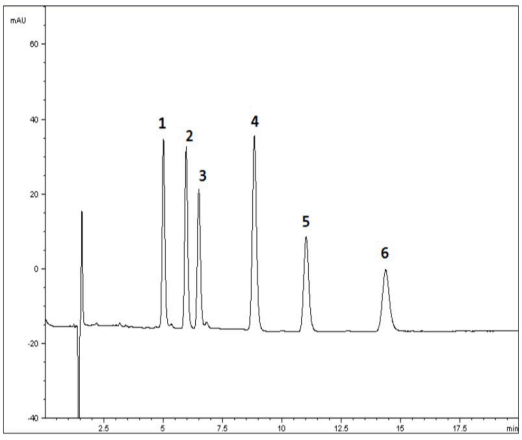
Cannabinoids

A reliable and simple LCMS-friendly method





Notes: These compounds are found in the flower of plants in the genus Cannabis. CBD is one of over one hundred identified cannabinoids in cannabis plants and can account for 40% of the plant's extract. CBD may carry properties to reduce anxiety and provide anti-psychotic effects by having a low affinity for the cannabinoid CB1 and CB2 receptors. Multiple strains of Cannabis have been found to contain a significant variation in ratios of CBD to THC, the main psychoactive compound found in marijuana. As defined by U.S. federal law, non- psychoactive hemp (also commonly termed as industrial hemp), cannot contain a Δ-9 tetrahydrocannabinol concentration of more than 0.3% on a dry-weight basis.

Method Conditions

Column: Cogent Bidentate C18™, 4µm, 100Å

Catalog No.: 40018-15P

Dimensions: 4.6 x 150 mm

Mobile Phase: 75% Acetonitrile/ 25% DI H_2O / 0.1% formic acid

Injection vol.: 1µL

Flow rate: 1.0 mL/min

Detection: 220nm

Sample: Cannabinoid mixture 0.1 mg/mL (100 ppm) of each

Peaks: 1. Cannabidiolic Acid
2. Cannabindiol
3. Tetrahydrocannabivarin
4. Cannabinol
5. Tetrahydrocannabinol
6. Tetrahydrocannabinolic acid A

Discussion

Due to the number of expanding products of homeopathic extracts from hemp, there is an equally increasing necessity to accurately analyze and separate the numerous compounds from these natural samples. While Cannabidiol has been extracted for multiple natural remedies, there is also numerous unwanted psychoactive constituents and related compounds that may also reside in these OTC supplements. The presented data illustrates how these standards can be both optimally separated and provide good run-to-run precision using the Cogent Bidentate™ C18 column.
The Bidentate™ C18 bonds a straight chain C18 hydrocarbon directly to the silica hydride surface with two separate points of attachment in a silicon-carbon bond. This creates an exceptionally rugged bond, which makes it valuable to those working with natural products. This unique bonding property, paired with a subsequent lack of silanols, eliminates any need for end-capping, complimenting the durability characteristics of this column.

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