

APPLICATION

Separation of Six Naturally Occurring Cannabinoids at High pH Using a Kinetex® 2.6 µm EVO C18 Core-Shell Column

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Overview

With the recent legalization of marijuana in various states across the USA, there has been increased focus on the study of medicinal uses of cannabis. There are several main classes of naturally occurring cannabinoids, each with different physical and psychoactive effects. The amount of each cannabinoid present varies depending on the strain of cannabis, thus making accurate quantitation incredibly important. Some strains for example are bred to decrease levels of THC which is psychoactive and increase levels of CBD which has had some success reducing epileptic seizures. Determining the profile for a strain of cannabis can be useful for effective treatment as well as quality control. By utilizing a high performance Kinetex EVO C18 column, excellent resolution and sensitivity are achieved. Moreover, because of the pH 1-12 stability of the Kinetex EVO C18 media, a high pH method can be used; promoting better negative ionization of these acidic compounds.

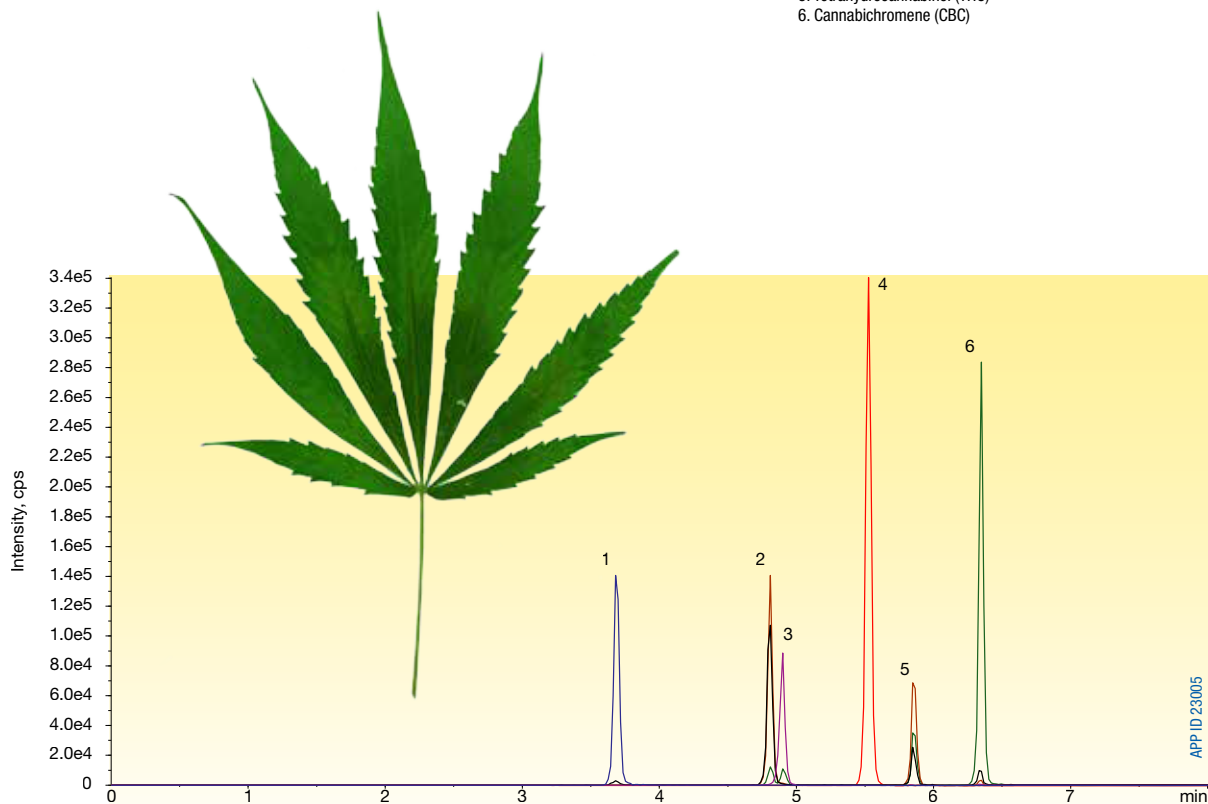
LC/MS/MS Conditions

Column: Kinetex 2.6 µm EVO C18
Dimensions: 100 x 2.1 mm
Part No.: 00D-4725-AN
Mobile Phase: A: 5 mM Ammonium Bicarbonate (pH 9.5) in Water
 B: Methanol / Acetonitrile (80:20)
Gradient:

Time (min)	% B
0	60
7	95
8	95
8.1	60
10	60

Flow Rate: 0.4 mL/min
Temperature: Ambient
Detection: MS/MS (AB SCIEX 4000 QTRAP®)
Sample:

1. Cannabidiol (CBD)
2. Cannabigerol (CBG)
3. Cannabivarin (CBDV)
4. Tetrahydrocannabinol (THC)
5. Cannabichromene (CBC)
6. Cannabinol (CBN)



APPLICATION

Ordering Information Kinetex[®] EVO C18 Core-Shell LC Columns

5 µm Minibore Columns (mm)				SecurityGuard [™] ULTRA Cartridges [‡]
30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
00A-4633-AN	00B-4633-AN	00D-4633-AN	00F-4633-AN	AJO-9298 for 2.1 mm ID

5 µm MidBore [™] Columns (mm)			SecurityGuard [™] ULTRA Cartridges [‡]
50 x 3.0	100 x 3.0	150 x 3.0	3/pk
00B-4633-YO	00D-4633-YO	00F-4633-YO	AJO-9297 for 3.0 mm ID

5 µm Analytical Columns (mm)				SecurityGuard [™] ULTRA Cartridges [‡]
50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	3/pk
00B-4633-E0	00D-4633-E0	00F-4633-E0	00G-4633-E0	AJO-9296 for 4.6 mm ID

2.6 µm Minibore Columns (mm)				SecurityGuard [™] ULTRA Cartridges [‡]
30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
00A-4725-AN	00B-4725-AN	00D-4725-AN	00F-4725-AN	AJO-9298 for 2.1 mm ID

2.6 µm MidBore [™] Columns (mm)			SecurityGuard [™] ULTRA Cartridges [‡]
50 x 3.0	100 x 3.0	150 x 3.0	3/pk
00B-4725-YO	00D-4725-YO	00F-4725-YO	AJO-9297 for 3.0 mm ID

2.6 µm Analytical Columns (mm)				SecurityGuard [™] ULTRA Cartridges [‡]
50 x 4.6	100 x 4.6	150 x 4.6		3/pk
00B-4725-E0	00D-4725-E0	00F-4725-E0		AJO-9296 for 4.6 mm ID

1.7 µm Minibore Columns (mm)			SecurityGuard [™] ULTRA Cartridges [‡]
50 x 2.1	100 x 2.1	150 x 2.1	3/pk
00B-4726-AN	00D-4726-AN	00F-4726-AN	AJO-9298 for 2.1 mm ID

[‡] SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000

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