

# Application Report 188

## Analysis of Cannabinoids Using Ascentis™ RP-Amide with LC-MS

Cannabinoids are active compounds in marijuana. An LC-MS method was developed using an Ascentis RP-Amide column and a MS compatible mobile phase to separate four cannabinoids isocratically in less than 20 minutes.

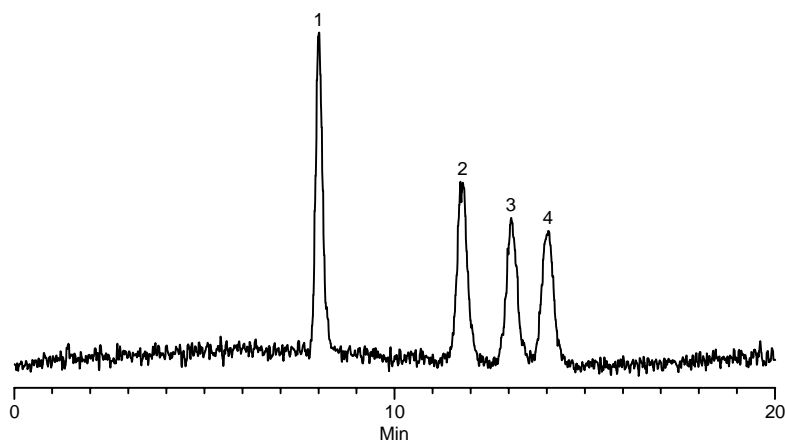
### Key Words

cannabidiol, cannabinol,  $\Delta^9$ -tetrahydrocannabinol,  $\Delta^8$ - tetrahydrocannabinol, C888, C6395, 13956-29-1, 521-35-7, T4889, T4764, 5957-75-5, 1972-08-3, Ascentis RP-Amide, 565324-U, LC-MS

Author: Carmen T. Santasania

Acquisition System: W2790

Notebook Reference: 1548-11



G002681

### Conditions

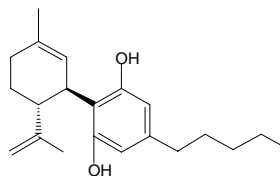
column: Ascentis RP-Amide, 15 cm x 4.6 mm I.D., 5  $\mu$ m particles (565324-U)  
mobile phase: 20:80, 10 mM ammonium acetate (pH 5.0 with acetic acid):acetonitrile  
flow rate: 1 mL/min., split to the MS  
temp.: 35 °C  
det.: MS ESI (+), SIR Mode  
injection: 5  $\mu$ L  
sample: 1  $\mu$ g/mL in water:acetonitrile (1:1)

### Peak IDs

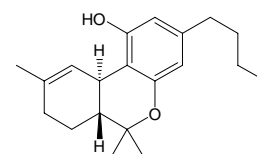
1. Cannabidiol m/z, 315.5
2. Cannabinol m/z, 311.4
3.  $\Delta^9$ -tetrahydrocannabinol m/z, 315.5
4.  $\Delta^8$ -tetrahydrocannabinol m/z, 315.5

### Structures

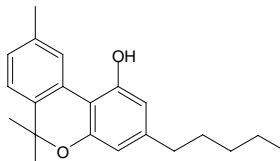
Cannabidiol - G002327



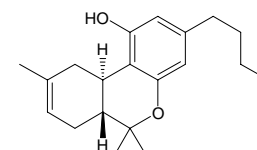
$\Delta^9$ -tetrahydrocannabinol - G002679



Cannabinol - G002328



$\Delta^8$ -tetrahydrocannabinol - G002680



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