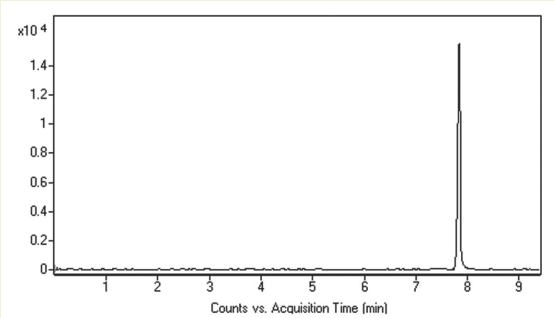
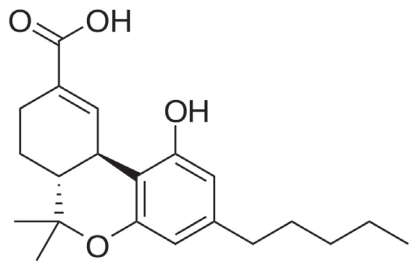
(l)-9-Carboxy-11-Nor-Delta-9- tetrahydrocannabinol

THC metabolite in urine matrix





(l)-9-Carboxy-11-Nor-Delta-9- tetrahydrocannabinol

Note: (l)-9-Carboxy-11-Nor-Delta-9- THC is the main metabolite of tetrahydrocannabinol (THC), formed in the body after consumption of cannabis. The compound stays in the body for a significant time, making it useful as a test compound for cannabis use. In the U.S., cannabis is a controlled substance at the Federal level, although two states have recently enacted laws legalizing it.

Method Conditions

Column: **Cogent Phenyl Hydride™**, 4µm, 100Å

Catalog No.: 69020-05P-2

Dimensions: 2.1 x 50 mm

Mobile Phase: A: DI H_2O / 0.1% formic acid (v/v)
B: Methanol / 0.1% formic acid (v/v)

Gradient:

time (min.)	%B
0	10
3	10
7	80
8	10

Post Time: 3 min

Flow rate: 0.4 mL/min

Injection vol.: 1µL

Sample: Urine sample was loaded into SPE cartridge II (Clean Screen Xcel, UCT Bristol, PA, USA) and eluted with 1 mL of acetonitrile, 2-propanol, formic acid (50/50/1). After elution, the sample was dried under nitrogen gas and dissolved in 100 microL of 50% methanol / 50% DI water / 0.1% formic acid. Before injection, the sample was filtered through a 0.45 µm nylon syringe filter (MicroSolv Tech Corp.)

Peak: (l)-9-Carboxy-11-Nor-Delta-9- THC, m/z 345.2060 $[M+H]^+$

Detection: ESI – POS - Agilent 6210 MSD TOF mass spectrometer

t_0: 0.9 min

Discussion

The extraction procedure using an SPE technique allows for successful detection of this cannabis metabolite with the Cogent Phenyl Hydride column. It is worth noting that the retention of this compound was achieved using methanol rather than acetonitrile as the organic component in the mobile phase.

The Cogent Phenyl Hydride phase provides excellent retention for analytes with rigid aromatic rings.

MANUFACTURED BY:
MICROSOLV TECHNOLOGY CORPORATION
9158 Industrial Blvd NE
Leland, NC 28451
p: 1.732.380.8900
f: 1.910.769.9435
customers@mtc-usa.com
www.Cogent-HPLC.com