SAMPLE HPLC-MS AND NMR ANALYSIS PROTOCOL

Sample: CBD2015/010

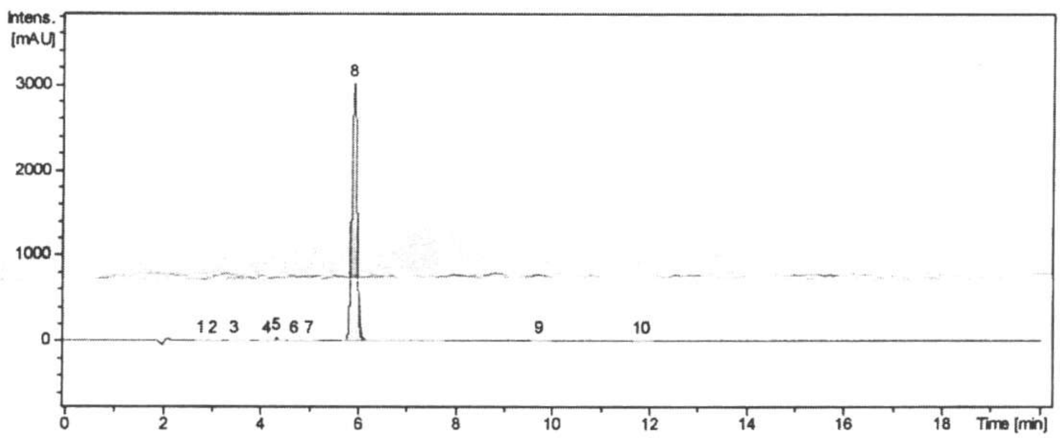
Production date: 18.8.2015

Expiration: 18.8.2016

Analysis: CBD purity and other cannabinoid content

Date: 19.8.2015

CBD / %	Cannabidivarin / %	C4 Analogue / %	Δ^9-THC / %	Δ^8-THC / %
99.0 ± 0.1	0.7 ± 0.1	0.2 ± 0.1	0.05 ± 0.05	Under detection limit



The level of total cannabinoid content and the distribution of single cannabinoids (specifically C3 and C4 analogues) vary depending on the strain of the variety used for extraction. Due to a structural similarity of CBD and its C3 and C4 analogues, purification is rather difficult.

Quantitative errors during measuring of peak area: 0.1%

The sample (25mg) is dissolved in acetonitrile (100 ml) and injected (1 µl) for HPLC-MS measurement.

HPLC conditions: Phenomenex Luna 5µm C18(2) 100 A column (150 x 4.6 mm ID x 5 µm), 25°C, UV detection 225 nm, isocratic condition (acetonitrile).

NMR measurement: The solid sample is dissolved in $CDCl_3$. ^1H and $^{13}C\{^1H\}$ spectra were recorded using a 500 MHz Unity INOVA Varian instrument. Chemical shifts are reported in parts per million (δ) relative to TMS, referenced to signal $CDCl_3$ (δ 7.26 ppm and δ 77.00 ppm, respectively).

NMR showed pure CBD signals without any detectable impurities.

Prezes Zarządu

Store in dark and cold.

Przemysław Jakubowski