

Abstract: (English version)

Title: Stability of phytocannabinoids during storage of *Cannabis sativa*

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The rigorous work deals with the problems of determination of Δ^9 -THC, CBD and CBN and their precursors. It assesses the influence of storage time and way on marijuana and on n-hexan extract of marijuana. A validation of the method of Δ^9 -THC, CBD and CBN determination was carried out through HPLC with UV detection at wave length of 220 nm, mobile phase methanol : water (85 : 15), column SUPELCOSILTMLC-18-DB.

The main aim was to detect the influence of various storage ways and storage time on principal content items of marijuana. There were 2 samples of marijuana available, each of them was divided in 12 parts, whereas 6 parts were placed in a plastic bag and the other 6 in a linen bag. After that one part of the sample in the plastic bag and one in the linen bag were located in 6 places, respectively from each sample. The places of storage were choosen with respect to possible location by marijuana users or to their possible experiments with this drug. The observation went on for 8,5 months.

The samples were put in a refrigerator, an ice-box, a room with daylight, on an exterior window sill, under a UV lamp or a sample was soaked and dried in turns. The quantity change of Δ^9 -THC, CBD and CBN in the sample depended both on the storage place and on the initial quantity of precursors observed analytes. Often also on the packing material. Precursors were always reduced. The most stable were the samples stored at a reduced temperature (the refrigerator, the ice-box) in the dark.

The stability test of n-hexano extract from marijuana proved that the extract is stable for a very short period of time and its content is subject to quick changes.