

CERTIFICATE

Matrix certified reference material of oil containing cannabinoids

METRANAL[®] CRM AN-BM04

This Certificate is designed in accordance with ISO Guide 31

Description:

The certified reference material of MCT oil with medium chain triglycerides AN-BM04 was prepared by spiking of hemp extract and individual phytocannabinoids. Selected cannabinoids are certified.

Packing:

3.0 ml of oil in an amber glass bottle.

Intended use:

This certified reference material is intended primarily for use in realizing metrological traceability, validation of analytical methods and the transfer of property values to other materials of similar composition.

Recommended analytical methods for method dependent measurements:

Liquid chromatography.

Specification:

Date of production: 29.06.2022

Shelf life: 2 years from the date of production

Bottle number: 053

Note:

The development of CRM AN-BM04 was realized in a collaboration with Metrological and Testing Laboratory of the Department of Food Analysis and Nutrition of UCT Prague accredited according to the ČSN EN ISO/IEC 17025:2018. The homogeneity and stability of the material was tested there, as well.



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Detailed information about the production, homogeneity testing and characterization of this CRM are described in the Certification report, which is available on request.

Metrological traceability:

Metrological traceability is realized by using certified calibration standard solutions for the calibration of measurement methods used (direct traceability to SI unit) and/or by simultaneous analysis of a matrix CRM (RM) of similar composition.

Homogeneity and stability:

Homogeneity and short-term stability have been demonstrated according to the ISO GUIDE 35.

Certified and indicative values and their uncertainties:

The certified and indicative values of selected cannabinoids are summarized in Table 1. The overall means evaluated have been given a status of certified and indicative values using the following criteria: data should be available from at least 5 or 3 accepted laboratory means for calculation of the overall mean for certified or indicative value, respectively. At combined uncertainties presented, the contribution of uncertainty of characterization of a particular property value is dominant. The certification study was conducted internationally in the form of an inter-laboratory comparison, with the participation of quality assured laboratories in the field of cannabinoid analysis.

Table 1: Certified and indicative values of selected cannabinoids.

Analyte	AN-BM04		AN-BM04	
	concentration [mg/kg]	uncertainty [mg/kg]	concentration [w/w %]	uncertainty [w/w %]
CBD	53 300	1 780	5.33	0.18
CBDA	329	34	0.0329	0.0034
Δ 9-THC	1 258	148	0.1258	0.0148
Δ 9-THCA-A	320	23	0.0320	0.0023
CBN	736	27	0.0736	0.0027
CBG	442	68	0.0442	0.0068
CBC	639	35	0.0639	0.0035
CBGA	(24.2)		(0.0024)	
CBDV	(658)		(0.0658)	
CBCA	(227)		(0.0227)	
THCV	(84.3)		(0.0084)	
CBL	(113)		(0.0113)	

Uncertainty – expanded combined uncertainty (k=2)
() indicative value

This CRM will be monitored over the period of its certification. If substantive changes of reference values occur, Analytika s.r.o. will notify the purchaser.

Storing and instruction for use:

This CRM has to be stored in the original bottle at temperatures below -12°C. The material should be analysed "as received". The temperature of the solution must be 20 ± 0.5 °C before

every use. The material in the bottle should be mixed thoroughly before each use by mechanical shaking of the content. At low temperatures, a solid fraction may be appear, which dissolves again on tempering. To ensure sufficient homogeneity, the recommended minimum weight for analysis is 50 mg.

Producer:

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Quality management systems of company ANALYTIKA[®], spol. s r.o.:

ČSN EN ISO 9001:2016
 ČSN EN ISO/IEC 17025:2018
 ČSN EN ISO 17034:2017

Manager of Department of RM:


Ing. Daniela Weissarová

Date of the first issue of certificate: 01.09 2022
 Certificate revision date:

Head of production department:


Mgr. Mirka Petránková

Revision of certificate:
 Version of certificate: 01