

Test Report

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Test Report No.: FR002212_S21-002269

Date: 10th March 2021

Customer:	NaturalWorks Trading Limited
Analysis:	Cannabinoid screen by LC-MS/MS and Cannabidiol (CBD) by HPLC-UV
Matrix:	CBD product
Received:	23 rd of February 2021
Analysed	24 th of February to 9 th of March 2021

1. BACKGROUND

This report describes the analytical testing of a CBD sample product.

The term "CBD" is an acronym for cannabidiol, which is one of several cannabinoids, or chemical compounds, that are found in cannabis and hemp plants.

The sample was analysed for the concentrations of 14 cannabinoids:

- **CBC**, Canabichromene
- **CBC-A**, Cannabichromenic acid
- **CBD**, Cannabidiol
- **CBD-A**, Cannabidiolic acid
- **CBDV**, Cannabidivarin
- **CBDV-A**, Cannabidivarinic acid
- **CBG**, Cannabigerol
- **CBG-A**, Cannabigerolic acid
- **CBN**, Cannabinol
- **Δ8-THC**, Delta-8-Tetrahydrocannabinol
- **Δ9-THC**, Delta-9-Tetrahydrocannabinol
- **THC-A**, Tetrahydrocannabinolic acid
- **THCV**, Tetrahydrocannabivarin
- **THCV-A**, Tetrahydrocannabivarinic acid

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2. SAMPLE DESCRIPTION

The sample was received at the laboratory in the manufacturers packaging and in satisfactory condition.

The sample was stored in the dark at ambient temperature prior to analysis.

A unique identifying number was assigned to the sample using the Fera laboratory information management system. The relevant sample details are shown in the table below.

Sample information				
Fera reference	Customer reference	Description	Batch/LOT code	Best before
S21-002269	20% MCT CBD oil: N0548	Naturalworks. CBD oil in MCT carrier oil. 2000mg CBD. 10 ml.	N0548	03/2023

3. SAMPLING AND ANALYSIS

3.1 Cannabinol (CBN), delta-9-tetrahydrocannabinol (Δ 9-THC), delta-8-tetrahydrocannabinol (Δ 8-THC), tetrahydrocannabinolic acid (THC-A), tetrahydrocannabivarin (THCV), canabichromene (CBC), cannabichromenic acid (CBC-A), cannabidiolic acid (CBD-A), cannabidivarin (CBDV), cannabidivarinic acid (CBDV-A), cannabigerol (CBG), cannabigerolic acid (CBG-A) and tetrahydrocannabivarinic acid (THCV-A)

The sample was extracted into solvent and diluted before the cannabinoids were determined using LC-MS/MS. Accuracy of the method was assessed by analysing over spiked blank material alongside the samples.

3.2 Cannabidiol (CBD)

The sample was extracted into solvent and diluted before the cannabidiol was determined using LC-UV. Accuracy of the method was assessed by analysing in-house reference materials with known concentrations of CBD.

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4. RESULTS

4.1 Cannabinoid concentrations in mg/kg

Sample identification		Cannabinoid concentration (mg/kg)													
Fera reference	Customer reference	CBD	CBC	CBC-A	CBD-A	CBDV	CBDV-A	CBG	CBG-A	CBN	Δ 8-THC	Δ 9-THC	THC-A	THCV	THCV-A
S21-002269	20% MCT CBD oil: N0548	227800	34.7	< 2.5	< 2.5	162	< 2.5	< 20	< 1.75	< 2.5	< 2.5	35.1	< 1.75	< 1	< 1

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Issuing Officer:	Mark Harrison, Analytical chemist	Date:	10/03/2021
Countersigning Manager:	Katharina Heinrich, Higher analytical chemist	Date:	10/03/2021

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