

# Test Report: Commercial in Confidence

Fera Science Ltd,  
Sand Hutton,  
York,  
YO41 1LZ  
United Kingdom



1642

Test Report No.: FR001224\_S19049326

Date: 11<sup>th</sup> June 2020

Customer:	MG Group Limited
Analysis:	Suite of 7 cannabinoids and metals
Matrix:	Various CBD products
Received:	6 <sup>th</sup> of December 2019
Analysed	11 <sup>th</sup> to 20 <sup>th</sup> of December 2019

## 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 7 cannabinoids:

- **CBC**, Cannabichromene
- **CBD**, Cannabidiol
- **CBDA**, Cannabidiolic acid
- **CBG**, Cannabigerol
- **CBN**, Cannabinol
- **THC**, Tetrahydrocannabinol
- **THCA**, Tetrahydrocannabinolic acid

The sample was also analysed for the concentration of metals: Arsenic, Cadmium, Mercury and Lead.

# Test Report: Commercial in Confidence

## 2. SAMPLE DESCRIPTION

The sample was received at the laboratory in satisfactory condition and stored at ambient temperature prior to analysis.

The sample was received in duplicate and contained within amber glass vials with black plastic screw caps. 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	Sample identification	Sample type	Batch/LOT code	Best before
S19-049326	Broad spectrum CBD tincture 250mg. B/N Tinc250/01	CBD oil	B/N Tinc250/01	N/A

## 3. SAMPLING AND ANALYSIS

### 3.1 Cannabinoids

**Cannabidiol (CBD)** - The sample was extracted into solvent and diluted before CBD was determined using LC-UV. Accuracy of the method was assessed by analysing in-house reference material with known concentrations of CBD alongside the sample.

**Cannabichromene (CBC), cannabidiolic acid (CBD-A), cannabigerol (CBG), cannabinol (CBN), Tetrahydrocannabinol (THC) and tetrahydrocannabinolic acid (THC-A)** - The sample was extracted into solvent and diluted before the cannabinoids were determined using LC-UV. Accuracy of the method was assessed by overspiking samples with a known concentration of each cannabinoid. **This method does not fall under the scope of our ISO17025 accreditation.**

### 3.2 Metals

Aliquots of homogenised test sample were digested in a mixture of nitric acid and hydrochloric acid using a high-pressure microwave system. Quantification was by inductively coupled plasma-mass spectrometry (ICP-MS) with collision cell. Quality checks included blanks, spikes and certified reference materials.

# Test Report: Commercial in Confidence

## 4. RESULTS

### 4.1 Cannabidiol

Sample information		
Fera reference	Customer identification	CBD (%)
S19-049326	Broad spectrum CBD tincture 250mg. B/N Tinc250/01	2.4

Expanded relative measurement uncertainty (95% confidence) for CBD is 12.8%.

### 4.2 Cannabichromene (CBC), cannabidiolic acid (CBD-A), cannabigerol (CBG), cannabinol (CBN), Tetrahydrocannabinol (THC) and tetrahydrocannabinolic acid (THC-A)

Sample identification		Other cannabinoid concentrations (%)					
Fera reference	Sample identification	CBC	CBDA	CBG	CBN	THC	THCA
S19-049326	Broad spectrum CBD tincture 250mg. B/N Tinc250/01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

### 4.3 Metals

Sample identification		Metal concentrations (mg/kg)			
Fera reference	Sample identification	Arsenic	Cadmium	Mercury	Lead
S19-049326	Broad spectrum CBD tincture 250mg. B/N Tinc250/01	< 0.005	< 0.005	< 0.01	< 0.005

# Test Report: Commercial in Confidence

<b>Issuing Officer:</b>	Mark Harrison, Analytical chemist	<b>Date:</b>	23/12/19
<b>Countersigning Manager:</b>	Michael Dickinson, Senior analytical chemist	<b>Date:</b>	23/12/19

This report has been prepared by Fera Science Limited ("Fera") for the for the sole benefit of MG Group Limited. This document, and all the information, images and intellectual property rights in it belong to Fera (or its licensees). No part of the text or graphics may be reproduced without the prior written permission of Fera. Except as otherwise advised in writing by Fera, this information is confidential in nature must be treated by the receiver with at least the degree of care that it applies to its own confidential information (and always with at least a reasonable standard of care).

Fera shall not be liable for any claims, losses, demands or damages of any kind whatsoever (whether such claims, losses, demands or damages were foreseeable, known or otherwise and whether direct, indirect or consequential) arising out of or in connection with: (i) any advice given by Fera or its representatives; and/or (ii) the preparation of any technical or scientific reports. Fera makes no representation as to the suitability of using any particular goods in any manufacturing processes or scientific research, nor as to their use in conjunction with any other materials. Fera shall not be liable for any reliance placed on, nor for any recommendations, interpretation, analysis, guidance, suggestions, proposals or endorsements made in connection with, the services and/or the commercial or scientific activities carried out by Fera or its representatives.

© 2020 Fera Science Limited