

SAMPLE NAME: cbdMD Tincture 30 mL Berry 1500 mg
Infused, Non-Inhalable

CULTIVATOR / MANUFACTURER

Business Name:
License Number:
Address:

DISTRIBUTOR

Business Name: cbdMD
License Number:
Address:



SAMPLE DETAIL

Batch Number: 01641Q4.1
Sample ID: 200616T013

Date Collected: 06/16/2020
Date Received: 06/16/2020
Batch Size:
Sample Size: 1.0 Unit(s)
Unit Mass: 30 Milliliters per Unit
Serving Size:



Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: **Not Detected**

Total CBD: **1550.820 mg/unit**

Total Cannabinoids: **1568.100 mg/unit**

Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step:

Total THC = $\Delta 9\text{THC} + (\text{THCa} \cdot 0.877)$
Total CBD = $\text{CBD} + (\text{CBDA} \cdot 0.877)$
Total Cannabinoids = $(\Delta 9\text{THC} + 0.877 \cdot \text{THCa}) + (\text{CBD} + 0.877 \cdot \text{CBDA}) + (\text{CBG} + 0.877 \cdot \text{CBGa}) + (\text{THCV} + 0.877 \cdot \text{THCVa}) + (\text{CBC} + 0.877 \cdot \text{CBCa}) + (\text{CBDV} + 0.877 \cdot \text{CBDVa}) + \Delta 8\text{THC} + \text{CBL} + \text{CBN}$

Moisture: NT

Density: **0.9537 g/mL**

Viscosity: NT

SAFETY ANALYSIS - SUMMARY

Pesticides: NT

Mycotoxins: NT

Residual Solvents: NT

Heavy Metals: NT

Microbial Impurities (PCR): **✓ PASS**

Microbial Impurities (Plating): **ND**

Foreign Material: NT

Water Activity: NT

Vitamin E Acetate: NT

TERPENOID ANALYSIS - SUMMARY

35 TESTED, TOP 3 HIGHLIGHTED

● **Limonene 0.56 mg/g**

For quality assurance purposes. Not a Pre-Harvest Hemp Lab Test Report. These results relate only to the sample included on this report. This report shall not be reproduced, except in full, without written approval of the laboratory.

Sample Certification: California Code of Regulations Title 16 Effect Date January 16, 2019. Authority: Section 26013, Business and Professions Code. Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT) too numerous to count >250 cfu/plate (TNTC), colony-forming unit (cfu)

Mark DeFerrari
LQC Analyzed by: Mark DeFerrari
Date: 06/20/2020

Josh Wurzer
Approved by: Josh Wurzer, President
Date: 06/20/2020



Cannabinoid Analysis

Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD).

Method: QSP - (1157) Analysis of Cannabinoids by HPLC-DAD

TOTAL THC: Not Detected

Total THC ($\Delta 9$ THC+0.877*THCa)

TOTAL CBD: 1550.820 mg/unit

Total CBD (CBD+0.877*CBDA)

TOTAL CANNABINOIDS: 1568.100 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + $\Delta 8$ THC + CBL + CBN

TOTAL CBG: 9.030 mg/unit

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: ND

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 5.130 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 06/18/2020

COMPOUND	LOD/LOQ (mg/mL)	MEASUREMENT UNCERTAINTY (mg/mL)	RESULT (mg/mL)	RESULT (%)
CBD	0.080 / 0.220	±2.4761	51.694	5.4204
CBG	0.040 / 0.100	±0.0187	0.301	0.0316
CBDV	0.040 / 0.140	±0.0090	0.171	0.0179
CBN	0.020 / 0.080	±0.0038	0.104	0.0109
$\Delta 9$ THC	0.040 / 0.100	N/A	ND	ND
$\Delta 8$ THC	0.20 / 0.40	N/A	ND	ND
THCa	0.020 / 0.040	N/A	ND	ND
THCV	0.040 / 0.160	N/A	ND	ND
THCVa	0.040 / 0.100	N/A	ND	ND
CBDA	0.020 / 0.060	N/A	ND	ND
CBDVa	0.020 / 0.060	N/A	ND	ND
CBGa	0.040 / 0.120	N/A	ND	ND
CBL	0.060 / 0.160	N/A	ND	ND
CBC	0.060 / 0.200	N/A	ND	ND
CBCa	0.020 / 0.080	N/A	ND	ND
SUM OF CANNABINOIDS			52.270 mg/mL	5.4808%

Unit Mass: 30 Milliliters per Unit / Serving Size:

$\Delta 9$ THC per Unit	1000.0 per-package limit	ND	PASS
$\Delta 9$ THC per Serving			
Total THC per Unit		ND	
Total THC per Serving			
CBD per Unit		1550.820 mg/unit	
CBD per Serving			
Total CBD per Unit		1550.820 mg/unit	
Total CBD per Serving			
Sum of Cannabinoids per Unit		1568.100 mg/unit	
Sum of Cannabinoids per Serving			
Total Cannabinoids per Unit		1568.100 mg/unit	
Total Cannabinoids per Serving			

MOISTURE TEST RESULT

Not Tested

DENSITY TEST RESULT

0.9537 g/mL
Tested 06/18/2020
Method: QSP - (1152) Sample Preparation

VISCOSITY TEST RESULT

Not Tested





Terpenoid Analysis

Terpene analysis utilizing gas chromatography-flame ionization detection (GC-FID). Terpenes are the aromatic compounds that endow cannabis with their unique scent and effect. Following are the primary terpenes detected.

Method: QSP - (1192) Analysis of Terpenoids by GC-FID

1 Limonene

A monoterpene with a fragrance that can be described as orangey, citrusy, sweet and tart. It is most commonly found in nature as D-Limonene and is a primary contributor to the distinct scent of orange peels, from which it is commonly derived. Found in numerous pines, red maple, silver maple, aspens, cottonwoods, hemlocks, sumac, cedar, junipers...etc.

TERPENOID TEST RESULTS - 06/19/2020

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Limonene	0.02 / 0.05	±0.021	0.56	0.056
α Pinene	0.03 / 0.09	N/A	ND	ND
Camphene	0.04 / 0.11	N/A	ND	ND
Sabinene	0.04 / 0.11	N/A	ND	ND
β Pinene	0.04 / 0.11	N/A	ND	ND
Myrcene	0.04 / 0.11	N/A	ND	ND
α Phellandrene	0.05 / 0.1	N/A	ND	ND
3 Carene	0.04 / 0.1	N/A	ND	ND
α Terpinene	0.04 / 0.1	N/A	ND	ND
Eucalyptol	0.03 / 0.08	N/A	ND	ND
Ocimene	0.03 / 0.09	N/A	ND	ND
γ Terpinene	0.04 / 0.1	N/A	ND	ND
Sabinene Hydrate	0.02 / 0.07	N/A	ND	ND
Fenchone	0.04 / 0.12	N/A	ND	ND
Terpinolene	0.03 / 0.09	N/A	ND	ND
Linalool	0.03 / 0.08	N/A	ND	ND
Fenchol	0.03 / 0.09	N/A	ND	ND
(-)-Isopulegol	0.02 / 0.05	N/A	ND	ND
Camphor	0.1 / 0.2	N/A	ND	ND
Isoborneol	0.04 / 0.1	N/A	ND	ND
Borneol	0.1 / 0.2	N/A	ND	ND
Menthol	0.03 / 0.09	N/A	ND	ND
Terpineol	0.02 / 0.07	N/A	ND	ND
Nerol	0.03 / 0.09	N/A	ND	ND
R-(+)-Pulegone	0.03 / 0.09	N/A	ND	ND
Geraniol	0.02 / 0.07	N/A	ND	ND
Geranyl Acetate	0.02 / 0.06	N/A	ND	ND
α Cedrene	0.02 / 0.07	N/A	ND	ND
β Caryophyllene	0.02 / 0.07	N/A	ND	ND
α Humulene	0.02 / 0.05	N/A	ND	ND
Valencene	0.01 / 0.03	N/A	ND	ND
Nerolidol	0.3 / 0.8	N/A	ND	ND
Caryophyllene Oxide	0.04 / 0.11	N/A	ND	ND
Guaiol	0.03 / 0.09	N/A	ND	ND
Cedrol	0.04 / 0.11	N/A	ND	ND
α Bisabolol	0.02 / 0.07	N/A	ND	ND
TOTAL TERPENOIDS			0.56 mg/g	0.056%





Microbial Impurities Analysis
 PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbial impurities.

Method: QSP - (1221) Analysis of Microbial Impurities

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbial impurities.

Method: QSP - (6794) Plating with 3M™ Petrifilm™

MICROBIAL IMPURITIES TEST RESULTS (PCR) - 06/20/2020 ✔ PASS

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing <i>Escherichia coli</i>	Detect	ND	PASS
<i>Salmonella</i> spp.	Detect	ND	PASS
<i>Aspergillus fumigatus</i>		NT	
<i>Aspergillus flavus</i>		NT	
<i>Aspergillus niger</i>		NT	
<i>Aspergillus terreus</i>		NT	

MICROBIAL IMPURITIES TEST RESULTS (PLATING) - 06/20/2020 ND

COMPOUND	RESULT (cfu/g)
Aerobic Plate Count	ND
Total Yeast and Mold	ND

