

**SAMPLE NAME: cbdMD Recover 4 oz 750 mg Tub**

Infused, Non-Inhalable

**CULTIVATOR / MANUFACTURER**

**Business Name:**

**License Number:**

**Address:**

**DISTRIBUTOR**

**Business Name: cbdMD**

**License Number:**

**Address:**

**SAMPLE DETAIL**

**Batch Number:** 20083REC

**Sample ID:** 200618R014

**Date Collected:** 06/18/2020

**Date Received:** 06/18/2020

**Batch Size:**

**Sample Size:** 1.0 Unit(s)

**Unit Mass:** 120 Grams per Unit

**Serving Size:**



Scan QR code to verify authenticity of results.

**CANNABINOID ANALYSIS - SUMMARY**

**Total THC: Not Detected**

**Total CBD: 743.160 mg/unit**

**Sum of Cannabinoids: 755.160 mg/unit**

**Total Cannabinoids: 755.160 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 =  $\text{CBD} + (\text{CBDa} \cdot 0.877)$   
 Sum of Cannabinoids =  $\Delta 9\text{THC} + \text{THCa} + \text{CBD} + \text{CBDa} + \text{CBG} + \text{CBGa} + \text{THCV} + \text{THCVa} + \text{CBC} + \text{CBCa} + \text{CBDV} + \text{CBDVa} + \Delta 8\text{THC} + \text{CBL} + \text{CBN}$   
 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: NT**

**Viscosity: NT**

**SAFETY ANALYSIS - SUMMARY**

**$\Delta 9\text{THC}$  per Unit: ✔ PASS**

**Foreign Material: NT**

**Water Activity: NT**

**Vitamin E Acetate: NT**

**Pesticides: NT**

**Mycotoxins: NT**

**Residual Solvents: NT**

**Heavy Metals: NT**

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

**Microbial Impurities (Plating): DETECTED**

**TERPENOID ANALYSIS - SUMMARY**

35 TESTED, TOP 3 HIGHLIGHTED

● **Menthol 0.67 mg/g**

● **Limonene 0.46 mg/g**

●  **$\alpha$  Pinene 0.38 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)

*Reza Naemeh*  
 LQC verified by: Reza Naemeh  
 Date: 06/22/2020

*Josh Wurzer*  
 Approved by: Josh Wurzer, President  
 Date: 06/22/2020



CANNABINOID TEST RESULTS - 06/20/2020

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 ( $\Delta^9\text{THC} + 0.877 * \text{THCa}$ )

**TOTAL CBD: 743.160 mg/unit**

Total CBD ( $\text{CBD} + 0.877 * \text{CBDa}$ )

**TOTAL CANNABINOIDS: 755.160 mg/unit**

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

**TOTAL CBG: 7.320 mg/unit**

Total CBG ( $\text{CBG} + 0.877 * \text{CBGa}$ )

**TOTAL THCV: ND**

Total THCV ( $\text{THCV} + 0.877 * \text{THCVa}$ )

**TOTAL CBC: ND**

Total CBC ( $\text{CBC} + 0.877 * \text{CBCa}$ )

**TOTAL CBDV: 2.640 mg/unit**

Total CBDV ( $\text{CBDV} + 0.877 * \text{CBDVa}$ )

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	$\pm 0.2966$	6.193	0.6193
CBG	0.002 / 0.005	$\pm 0.0038$	0.061	0.0061
CBDV	0.002 / 0.007	$\pm 0.0012$	0.022	0.0022
CBN	0.001 / 0.004	$\pm 0.0006$	0.017	0.0017
$\Delta^9\text{THC}$	0.002 / 0.005	N/A	ND	ND
$\Delta^8\text{THC}$	0.01 / 0.02	N/A	ND	ND
THCa	0.001 / 0.002	N/A	ND	ND
THCV	0.002 / 0.008	N/A	ND	ND
THCVa	0.002 / 0.005	N/A	ND	ND
CBDa	0.001 / 0.003	N/A	ND	ND
CBDVa	0.001 / 0.003	N/A	ND	ND
CBGa	0.002 / 0.006	N/A	ND	ND
CBL	0.003 / 0.008	N/A	ND	ND
CBC	0.003 / 0.010	N/A	ND	ND
CBCa	0.001 / 0.004	N/A	ND	ND
<b>SUM OF CANNABINOIDS</b>			<b>6.293 mg/g</b>	<b>0.6293%</b>

Unit Mass: 120 Grams per Unit

$\Delta^9\text{THC}$ per Unit	1000.0 per-package limit	ND	PASS
Total THC per Unit		ND	
CBD per Unit		743.160 mg/unit	
Total CBD per Unit		743.160 mg/unit	
Sum of Cannabinoids per Unit		755.160 mg/unit	
Total Cannabinoids per Unit		755.160 mg/unit	

MOISTURE TEST RESULT

Not Tested
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DENSITY TEST RESULT

Not Tested
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VISCOSITY TEST RESULT

Not Tested
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## 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:** OSP - (1192) Analysis of Terpenoids by GC-FID

### 1 Menthol

A monoterpenoid alcohol with a fragrance that can be described as fresh, cool and herbal. It is responsible for the distinct odor of mint. It is frequently added to cigarettes and mouthwash as a flavorant. Found in mint, sunflower, micromeria, mountain mint, rose geranium, pennyroyal, tarragon, savory, basil, juniper, couch grass, rhubarb, acinos (basil thyme), ironwort, muña...etc.

### 2 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.

### 3 $\alpha$ Pinene

One of two isomers of the monoterpene Pinene, the most abundant terpene in the natural world. It is responsible for the distinct aroma of many coniferous trees, particularly pines, from which it derives its name. It is a primary constituent of turpentine. Found in pines, rose gun, parsley, frankincense, guava, juniper, rosemary, nutmeg, blue gum, valerian...etc.

## TERPENOID TEST RESULTS - 06/22/2020

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Menthol	0.03 / 0.09	±0.041	0.67	0.067
Limonene	0.02 / 0.05	±0.017	0.46	0.046
$\alpha$ Pinene	0.03 / 0.09	±0.025	0.38	0.038
Camphor	0.1 / 0.2	±0.01	0.3	0.03
Eucalyptol	0.03 / 0.08	±0.015	0.29	0.029
Camphene	0.04 / 0.11	±0.016	0.21	0.021
$\beta$ Pinene	0.04 / 0.11	N/A	<LOQ	<LOQ
(-)-Isopulegol	0.02 / 0.05	N/A	<LOQ	<LOQ
Terpineol	0.02 / 0.07	N/A	<LOQ	<LOQ
$\beta$ Caryophyllene	0.02 / 0.07	N/A	<LOQ	<LOQ
Sabinene	0.04 / 0.11	N/A	ND	ND
Myrcene	0.04 / 0.11	N/A	ND	ND
$\alpha$ Phellandrene	0.05 / 0.1	N/A	ND	ND
3 Carene	0.04 / 0.1	N/A	ND	ND
$\alpha$ Terpinene	0.04 / 0.1	N/A	ND	ND
Ocimene	0.03 / 0.09	N/A	ND	ND
$\gamma$ 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
Isoborneol	0.04 / 0.1	N/A	ND	ND
Borneol	0.1 / 0.2	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
$\alpha$ Cedrene	0.02 / 0.07	N/A	ND	ND
$\alpha$ 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
$\alpha$ Bisabolol	0.02 / 0.07	N/A	ND	ND
<b>TOTAL TERPENOIDS</b>			<b>2.31 mg/g</b>	<b>0.231%</b>





**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

**MICROBIAL IMPURITIES TEST RESULTS (PCR) - 06/22/2020** ✔ 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	

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

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

**MICROBIAL IMPURITIES TEST RESULTS (PLATING) - 06/22/2020** **DETECTED**

COMPOUND	RESULT (cfu/g)
Aerobic Plate Count	100
Total Yeast and Mold	ND

