

**SAMPLE NAME: cbdMD Freeze 3 oz 3000 mg Roller**

Infused, Non-Inhalable

**CULTIVATOR / MANUFACTURER**

Business Name:

License Number:

Address:

**DISTRIBUTOR**

Business Name: cbdMD

License Number:

Address:



**SAMPLE DETAIL**

Batch Number: 20220FRE

Sample ID: 200814R014

Date Collected: 08/14/2020

Date Received: 08/14/2020

Batch Size:

Sample Size: 1.0 Unit(s)

Unit Mass: 90 Grams per Unit

Serving Size:



Scan QR code to verify authenticity of results.

**CANNABINOID ANALYSIS - SUMMARY**

Total THC: **Not Detected**

Total CBD: **3437.460 mg/unit**

Sum of Cannabinoids: **3454.290 mg/unit**

Total Cannabinoids: **3454.290 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: **✓PASS**

Mycotoxins: **✓PASS**

Residual Solvents: NT

Heavy Metals: **✓PASS**

Microbial Impurities (PCR): **✓PASS**

Microbial Impurities (Plating): **ND**

**TERPENOID ANALYSIS - SUMMARY**

35 TESTED, TOP 3 HIGHLIGHTED

● Menthol 45.90 mg/g

●  $\gamma$  Terpinene 0.1 mg/g

● (-)-Isopulegol 0.08 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)



LQC verified by: Michael Pham  
Date: 08/19/2020



Approved by: Josh Wurzer, President  
Date: 08/19/2020



CANNABINOID TEST RESULTS - 08/16/2020

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

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

**TOTAL THC: Not Detected**

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

**TOTAL CBD: 3437.460 mg/unit**

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

**TOTAL CANNABINOIDS: 3454.290 mg/unit**

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

**TOTAL CBG: 16.830 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: <LOQ**

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

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.080 / 0.220	$\pm 1.8295$	38.194	3.8194
CBG	0.040 / 0.100	$\pm 0.0116$	0.187	0.0187
CBDV	0.040 / 0.140	N/A	<LOQ	<LOQ
$\Delta 9\text{THC}$	0.040 / 0.100	N/A	ND	ND
$\Delta 8\text{THC}$	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
CBN	0.020 / 0.080	N/A	ND	ND
CBC	0.060 / 0.200	N/A	ND	ND
CBCa	0.020 / 0.080	N/A	ND	ND
<b>SUM OF CANNABINOIDS</b>			<b>38.381 mg/g</b>	<b>3.8381%</b>

Unit Mass: 90 Grams per Unit

$\Delta 9\text{THC}$ per Unit	1000.0 per-package limit	ND	PASS
Total THC per Unit		ND	
CBD per Unit		3437.460 mg/unit	
Total CBD per Unit		3437.460 mg/unit	
Sum of Cannabinoids per Unit		3454.290 mg/unit	
Total Cannabinoids per Unit		3454.290 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 monoterpene 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 $\gamma$ Terpinene

One of four isomers of the monoterpene Terpinene. It has a fragrance that can be described as sweet, spicy, tropical, woody and oily with a hint of citrus. Found in marjoram, cardamom, tea tree, bible hyssop...etc.

### 3 (-)-Isopulegol

A monoterpene with a fragrance that can be described as woody and minty. It is also a constituent of toxic secretions of exploding ants. Found in eucalyptus, rosemary, citrus, lemon-verbena, micromeria, lemon balm...etc.

## TERPENOID TEST RESULTS - 08/19/2020

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Menthol	0.03 / 0.09	±2.818	45.90	4.590
$\gamma$ Terpinene	0.04 / 0.1	±0.01	0.1	0.01
(-)-Isopulegol	0.02 / 0.05	±0.003	0.08	0.008
$\alpha$ Terpinene	0.04 / 0.1	N/A	<LOQ	<LOQ
$\alpha$ 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
$\beta$ Pinene	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
Limonene	0.02 / 0.05	N/A	ND	ND
Eucalyptol	0.03 / 0.08	N/A	ND	ND
Ocimene	0.03 / 0.09	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
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
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
$\alpha$ Cedrene	0.02 / 0.07	N/A	ND	ND
$\beta$ Caryophyllene	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>46.08 mg/g</b>	<b>4.608%</b>



 **Pesticide Analysis**

**CATEGORY 1 PESTICIDE TEST RESULTS - 08/16/2020** ✔ PASS

**CATEGORY 1 AND 2 PESTICIDES**

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). \*GC-MS utilized where indicated.

**Method:** QSP - (1212) Analysis of Pesticides and Mycotoxins by LC-MS or QSP - (1213) Analysis of Pesticides by GC-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Aldicarb	0.03 / 0.09	≥ LOD	N/A	ND	PASS
Carbofuran	0.01 / 0.04	≥ LOD	N/A	ND	PASS
Chlordane*	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Chlorfenapyr*	0.03 / 0.10	≥ LOD	N/A	ND	PASS
Chlorpyrifos	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Coumaphos	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Daminozide	0.03 / 0.10	≥ LOD	N/A	ND	PASS
DDVP (Dichlorvos)	0.02 / 0.07	≥ LOD	N/A	ND	PASS
Dimethoate	0.02 / 0.07	≥ LOD	N/A	ND	PASS
Ethoprop(hos)	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Etofenprox	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Fenoxycarb	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Fipronil	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Imazalil	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Methiocarb	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Methyl parathion	0.03 / 0.10	≥ LOD	N/A	ND	PASS
Mevinphos	0.03 / 0.09	≥ LOD	N/A	ND	PASS
Paclobutrazol	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Propoxur	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Spiroxamine	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Thiacloprid	0.03 / 0.07	≥ LOD	N/A	ND	PASS

**CATEGORY 2 PESTICIDE TEST RESULTS - 08/16/2020** ✔ PASS

Abamectin	0.03 / 0.10	0.3	N/A	ND	PASS
Acephate	0.01 / 0.04	5	N/A	ND	PASS
Acequinocyl	0.02 / 0.05	4	N/A	ND	PASS
Acetamiprid	0.02 / 0.05	5	N/A	ND	PASS
Azoxystrobin	0.01 / 0.04	40	N/A	ND	PASS
Bifenazate	0.01 / 0.02	5	N/A	ND	PASS
Bifenthrin	0.01 / 0.02	0.5	N/A	ND	PASS
Boscalid	0.02 / 0.06	10	N/A	ND	PASS
Captan	0.2 / 0.5	5	N/A	ND	PASS
Carbaryl	0.01 / 0.02	0.5	N/A	ND	PASS
Chlorantraniliprole	0.01 / 0.03	40	N/A	ND	PASS

Continued on next page



 **Pesticide Analysis** *Continued*

**CATEGORY 2 PESTICIDE TEST RESULTS - 08/16/2020** *continued* ✔ PASS

**CATEGORY 1 AND 2 PESTICIDES**

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). \*GC-MS utilized where indicated.

**Method:** QSP - (1212) Analysis of Pesticides and Mycotoxins by LC-MS or QSP - (1213) Analysis of Pesticides by GC-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Clofentezine	0.02 / 0.06	0.5	N/A	ND	PASS
Cyfluthrin	0.1 / 0.4	1	N/A	ND	PASS
Cypermethrin	0.1 / 0.3	1	N/A	ND	PASS
Diazinon	0.01 / 0.04	0.2	N/A	ND	PASS
Dimethomorph	0.01 / 0.03	20	N/A	ND	PASS
Etoxazole	0.010 / 0.028	1.5	N/A	ND	PASS
Fenhexamid	0.02 / 0.1	10	N/A	ND	PASS
Fenpyroximate	0.03 / 0.08	2	N/A	ND	PASS
Flonicamid	0.01 / 0.04	2	N/A	ND	PASS
Fludioxonil	0.03 / 0.08	30	N/A	ND	PASS
Hexythiazox	0.01 / 0.04	2	N/A	ND	PASS
Imidacloprid	0.01 / 0.04	3	N/A	ND	PASS
Kresoxim-methyl	0.02 / 0.07	1	N/A	ND	PASS
Malathion	0.02 / 0.05	5	N/A	ND	PASS
Metalaxyl	0.02 / 0.06	15	N/A	ND	PASS
Methomyl	0.03 / 0.1	0.1	N/A	ND	PASS
Myclobutanil	0.03 / 0.1	9	N/A	ND	PASS
Naled	0.03 / 0.1	0.5	N/A	ND	PASS
Oxamyl	0.02 / 0.06	0.2	N/A	ND	PASS
Pentachloronitrobenzene*	0.03 / 0.09	0.2	N/A	ND	PASS
Permethrin	0.03 / 0.09	20	N/A	ND	PASS
Phosmet	0.03 / 0.10	0.2	N/A	ND	PASS
Piperonylbutoxide	0.003 / 0.009	8	N/A	ND	PASS
Prallethrin	0.03 / 0.08	0.4	N/A	ND	PASS
Propiconazole	0.01 / 0.03	20	N/A	ND	PASS
Pyrethrins	0.03 / 0.08	1	N/A	ND	PASS
Pyridaben	0.006 / 0.019	3	N/A	ND	PASS
Spinetoram	0.02 / 0.07	3	N/A	ND	PASS
Spinosad	0.02 / 0.06	3	N/A	ND	PASS
Spiromesifen	0.02 / 0.05	12	N/A	ND	PASS
Spirotetramat	0.01 / 0.02	13	N/A	ND	PASS
Tebuconazole	0.02 / 0.07	2	N/A	ND	PASS
Thiamethoxam	0.03 / 0.08	4.5	N/A	ND	PASS
Trifloxystrobin	0.01 / 0.03	30	N/A	ND	PASS





### Mycotoxin Analysis

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS).

**Method:** QSP - (1212) Analysis of Pesticides and Mycotoxins by LC-MS

MYCOTOXIN TEST RESULTS - 08/16/2020 ✔ PASS

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (µg/kg)	RESULT
Aflatoxin B1	2.0 / 6.0	20	N/A	ND	PASS
Aflatoxin B2	1.8 / 5.6	20	N/A	ND	PASS
Aflatoxin G1	1.0 / 3.1	20	N/A	ND	PASS
Aflatoxin G2	1.2 / 3.5	20	N/A	ND	PASS
Total Aflatoxin		20		ND	PASS
Ochratoxin A	6.3 / 19.2	20	N/A	ND	PASS



### Heavy Metals Analysis

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS).

**Method:** QSP - (1160) Analysis of Heavy Metals by ICP-MS

HEAVY METALS TEST RESULTS - 08/16/2020 ✔ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Cadmium	0.02 / 0.05	0.5	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Arsenic	0.02 / 0.1	1.5	N/A	ND	PASS
Mercury	0.002 / 0.01	3	N/A	ND	PASS



### 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) - 08/17/2020 ✔ 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) - 08/17/2020 **ND**

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

