

Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DATE ISSUED 02/01/2022

SAMPLE NAME: cbdMD Freeze 3 oz 750 mg Roller

Infused, Hemp Topical

CULTIVATOR / MANUFACTURER

Business Name: License Number:

Address:

SAMPLE DETAIL

Batch Number: 22026 Sample ID: 220128M033 **DISTRIBUTOR / TESTED FOR**

Business Name: cbdMD License Number: Address:

Date Collected: 01/28/2022 Date Received: 01/28/2022

Batch Size:

Sample Size: 1.0 units Unit Mass: 90 grams per Unit Serving Size: 1 grams per Serving







Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: Not Detected

Total CBD: 843.390 mg/unit

Sum of Cannabinoids: 861.210 mg/unit

Total Cannabinoids: 861.210 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 = Δ 9THC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids = Δ 9THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ8THC + CBL + CBN Total Cannabinoids = (Δ9THC+0.877*THCa) + (CBD+0.877*CBDa) + (CBG+0.877*CBGa) + (THCV+0.877*THCVa) + (CBC+0.877*CBCa) +

(CBDV+0.877*CBDVa) + Δ8THC + CBL + CBN

Density: 1.0063 g/mL

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 4.285%

Menthol 42.421 mg/g

γ Terpinene 0.152 mg/g

(-)-Isopulegol 0.102 mg/g

SAFETY ANALYSIS - SUMMARY

Pesticides: PASS

Mycotoxins: PASS

Heavy Metals: PASS

Microbiology (PCR): PASS

Microbiology (Plating): PASS

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

Sample Certification: Action Limits used in this report are a compilation of guidance from state regulatory agencies in all states. Action limits for required tests are either state-specific, or the lower of any conflicting state regulations based upon the panel requested.

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: Josh Antunovich Date: 02/01/2022

oproved by: Josh Wurzer, President ate: 02/01/2022





CBDMD FREEZE 3 OZ 750 MG ROLLER | DATE ISSUED 02/01/2022

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 (Δ9THC+0.877*THCa)

TOTAL CBD: 843.390 mg/unit

Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 861.210 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ 8THC + CBL + CBN

TOTAL CBG: 11.970 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: 2.700 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 01/30/2022

	COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Ī	CBD	0.004 / 0.011	±0.4489	9.371	0.9371
Ī	CBG	0.002 / 0.006	±0.0083	0.133	0.0133
	CBN	0.001 / 0.007	±0.0013	0.035	0.0035
Ī	CBDV	0.002/0.012	±0.0016	0.030	0.0030
Ī	Δ9ΤΗС	0.002/0.014	N/A	ND	ND
	Δ8ΤΗC	0.01 / 0.02	N/A	ND	ND
Ī	THCa	0.001 / 0.005	N/A	ND	ND
Ī	THCV	0.002/0.012	N/A	ND	ND
	THCVa	0.002/0.019	N/A	ND	ND
Ī	CBDa	0.001 / 0.026	N/A	ND	ND
	CBDVa	0.001/0.018	N/A	ND	ND
	CBGa	0.002 / 0.007	N/A	ND	ND
Ī	CBL	0.003 / 0.010	N/A	ND	ND
	СВС	0.003 / 0.010	N/A	ND	ND
	CBCa	0.001 / 0.015	N/A	ND	ND
	SUM OF CANNAE	SINOIDS		9.569 mg/g	0.9569%

Unit Mass: 90 grams per Unit / Serving Size: 1 grams per Serving

Δ9THC per Unit	TIVI	ND
Δ9THC per Serving		ND
Total THC per Unit		ND
Total THC per Serving		ND
CBD per Unit		843.390 mg/unit
CBD per Serving		9.371 mg/serving
Total CBD per Unit		843.390 mg/unit
Total CBD per Serving		9.371 mg/serving
Sum of Cannabinoids per Unit		861.210 mg/unit
Sum of Cannabinoids per Serving		9.569 mg/serving
Total Cannabinoids per Unit		861.210 mg/unit
Total Cannabinoids per Serving		9.569 mg/serving

DENSITY TEST RESULT

1.0063 g/mL

Tested 01/30/2022

Method: QSP 7870 - Sample Preparation











Terpenoid Analysis

Terpene analysis utilizing gas chromatographyflame ionization detection (GC-FID).

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



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.



 $\begin{array}{l} \gamma \, \text{Terpinene} \\ \text{One of four isomers of the monoterpene} \end{array}$ 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.



(-)-Isopulegol

A monoterpenoid 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, lemonverbena, micromeria, lemon balm...etc.

TERPENOID TEST RESULTS - 02/01/2022

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Menthol	0.008 / 0.025	±1.6968	42.421	4.2421
γTerpinene	0.006 / 0.018	±0.0026	0.152	0.0152
(-)-Isopulegol	0.005 / 0.016	±0.0041	0.102	0.0102
α Terpinene	0.005 / 0.017	±0.0009	0.062	0.0062
p-Cymene	0.005 / 0.016	±0.0012	0.044	0.0044
α Pinene	0.005 / 0.017	±0.0002	0.026	0.0026
Eucalyptol	0.006 / 0.018	±0.0006	0.025	0.0025
Sabinene	0.004 / 0.014	±0.0002	0.018	0.0018
β Pinene	0.004 / 0.014	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Myrcene	0.008 / 0.025	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Limonene	0.005 / 0.016	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Terpinolene	0.008 / 0.026	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Terpineol	0.016 / 0.055	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
β Caryophyllene	0.004 / 0.012	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Camphene	0.005 / 0.015	N/A	ND	ND
α Phellandrene	0.006 / 0.020	N/A	ND	ND
3 Carene	0.005 / 0.018	N/A	ND	ND
Ocimene	0.011/0.038	N/A	ND	ND
Sabinene Hydrate	0.006 / 0.022	N/A	ND	ND
Fenchone	0.009 / 0.028	N/A	ND	ND
Linalool	0.009/0.032	N/A	ND	ND
Fenchol	0.010 / 0.034	N/A	ND	ND
Camphor	0.006 / 0.019	N/A	ND	ND
Isoborneol	0.004 / 0.012	N/A	ND	ND
Borneol	0.005 / 0.016	N/A	ND	ND
Nerol	0.003 / 0.011	N/A	ND	ND
Citronellol	0.003 / 0.010	N/A	ND	ND
R-(+)-Pulegone	0.003 / 0.011	N/A	ND	ND
Geraniol	0.002 / 0.007	N/A	ND	ND
Geranyl Acetate	0.004 / 0.014	N/A	ND	ND
α Cedrene	0.005 / 0.016	N/A	ND	ND
trans-β-Farnesene	0.008 / 0.025	N/A	ND	ND
α Humulene	0.009/0.029	N/A	ND	ND
Valencene	0.009 / 0.030	N/A	ND	ND
Nerolidol	0.009 / 0.028	N/A	ND	ND
Caryophyllene Oxide	0.010 / 0.033	N/A	ND	ND
Guaiol	0.009 / 0.030	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
α Bisabolol	0.008 / 0.026	N/A	ND	ND
TOTAL TERPENOIDS			42.850 mg/g	4.285%





CBDMD FREEZE 3 OZ 750 MG ROLLER | DATE ISSUED 02/01/2022





Pesticide Analysis

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

Exclusions¹ see last page

Exclusions² see last page



COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (μg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (μg/g)	RESULT
Abamectin	0.03 / 0.10	0.3	N/A	ND	PASS
Acephate	0.02 / 0.07	5	N/A	ND	PASS
Acequinocyl	0.02 / 0.07	4	N/A	ND	PASS
Acetamiprid	0.02 / 0.05	5	N/A	ND	PASS
Aldicarb	0.03 / 0.08	≥LOD	N/A	ND	PASS
Azoxystrobin	0.02 / 0.07	40	N/A	ND	PASS
Bifenazate	0.01 / 0.04	5	N/A	ND	PASS
Bifenthrin	0.02 / 0.05	0.5	N/A	ND	PASS
Boscalid	0.03 / 0.09	10	N/A	ND	PASS
Captan	0.19/0.57	5	N/A	ND	PASS
Carbaryl	0.02 / 0.06	0.5	N/A	ND	PASS
Carbofuran	0.02 / 0.05	≥LOD	N/A	ND	PASS
Chlorantraniliprole	0.04 / 0.12	40	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
Clofentezine	0.03 / 0.09	0.5	N/A	ND	PASS
Coumaphos	0.02 / 0.07	≥LOD	N/A	ND	PASS
Cyfluthrin	0.12 / 0.38	1	N/A	ND	PASS
Cypermethrin	0.11/0.32	1	N/A	ND	PASS
Daminozide	0.02 / 0.07	≥LOD	N/A	ND	PASS
DDVP (Dichlorvos)	0.03 / 0.09	≥LOD	N/A	ND	PASS
Diazinon	0.02 / 0.05	0.2	N/A	ND	PASS
Dimethoate	0.03 / 0.08	≥LOD	N/A	ND	PASS
Dimethomorph	0.03 / 0.09	20	N/A	ND	PASS
Ethoprop(hos)	0.03 / 0.10	≥LOD	N/A	ND	PASS
Etofenprox	0.02 / 0.06	≥LOD	N/A	ND	PASS
Etoxazole	0.02 / 0.06	1.5	N/A	ND	PASS
Fenhexamid	0.03 / 0.09	10	N/A	ND	PASS
Fenoxycarb	0.03 / 0.08	≥LOD	N/A	ND	PASS
Fenpyroximate	0.02 / 0.06	2	N/A	ND	PASS
Fipronil	0.03 / 0.08	≥LOD	N/A	ND	PASS
Flonicamid	0.03 / 0.10	2	N/A	ND	PASS
Fludioxonil	0.03 / 0.10	30	N/A	ND	PASS
Hexythiazox	0.02 / 0.07	2	N/A	ND	PASS
Imazalil	0.02 / 0.06	≥LOD	N/A	ND	PASS
Imidacloprid	0.04 / 0.11	3	N/A	ND	PASS
Kresoxim-methyl	0.02 / 0.07	1	N/A	ND	PASS
Malathion	0.03 / 0.09	5	N/A	ND	PASS
Metalaxyl	0.02 / 0.07	15	N/A	ND	PASS
Methiocarb	0.02 / 0.07	≥LOD	N/A	ND	PASS



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CBDMD FREEZE 3 OZ 750 MG ROLLER | DATE ISSUED 02/01/2022





Pesticide Analysis Continued

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

PESTICIDE TEST RESULTS - 01/29/2022 continued **⊘** PASS

	COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
	Methomyl	0.03 / 0.10	0.1	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
	Myclobutanil	0.03/0.09	9	N/A	ND	PASS
	Naled	0.02 / 0.07	0.5	N/A	ND	PASS
	Oxamyl	0.04 / 0.11	0.2	N/A	ND	PASS
	Paclobutrazol	0.02 / 0.05	≥LOD	N/A	ND	PASS
	Pentachloronitrobenzene*	0.03/0.09	0.2	N/A	ND	PASS
	Permethrin	0.04 / 0.12	20	N/A	ND	PASS
	Phosmet	0.03 / 0.10	0.2	N/A	ND	PASS
	Piperonylbutoxide	0.02 / 0.07	8	N/A	ND	PASS
	Prallethrin	0.03 / 0.08	0.4	N/A	ND	PASS
	Propiconazole	0.02 / 0.07	20	N/A	ND	PASS
	Propoxur	0.03 / 0.09	≥LOD	N/A	ND	PASS
	Pyrethrins	0.04 / 0.12	1	N/A	ND	PASS
	Pyridaben	0.02 / 0.07	3	N/A	ND	PASS
	Spinetoram	0.02 / 0.07	3	N/A	ND	PASS
	Spinosad	0.02 / 0.07	3	N/A	ND	PASS
	Spiromesifen	0.02 / 0.05	12	N/A	ND	PASS
4	Spirotetramat	0.02 / 0.06	13	N/A	ND	PASS
	Spiroxamine	0.03 / 0.08	≥LOD	N/A	ND	PASS
V	Tebuconazole	0.02 / 0.07	2	N/A	ND	PASS
	Thiacloprid	0.03 / 0.10	≥LOD	N/A	ND	PASS
	Thiamethoxam	0.03 / 0.10	4.5	N/A	ND	PASS
	Trifloxystrobin	0.03 / 0.08	30	N/A	ND	PASS



Mycotoxin Analysis

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

 $\begin{tabular}{ll} \textbf{Method:} QSP~1212-Analysis~of~Pesticides~and~Mycotoxins~by\\ LC-MS \end{tabular}$

Exclusions³ see last page

MYCOTOXIN TEST RESULTS - 01/29/2022 **⊘ PASS**

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





Hemp Quality Assurance Testing

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CBDMD FREEZE 3 OZ 750 MG ROLLER | DATE ISSUED 02/01/2022



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 - 01/30/2022 **⊘** PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (μg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (μg/g)	RESULT
Arsenic	0.02 / 0.1	0.42	N/A	ND	PASS
Cadmium	0.02 / 0.05	0.27	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	0.4	N/A	ND	PASS



Microbiology Analysis

PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants.

Method: QSP 1221 - Analysis of Microbiological Contaminants

MICROBIOLOGY TEST RESULTS (PCR) - 02/01/2022 PASS

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing Escherichia coli	Not Detected in 1g	ND	PASS
Salmonella spp.	Not Detected in 1g	ND	PASS
Listeria monocytogenes	Not Detected in 1g	ND	PASS

Analysis conducted by $3M^{\text{TM}}$ Petrifilm and plate counts of microbiological contaminants.

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

MICROBIOLOGY TEST RESULTS (PLATING) - 02/01/2022 PASS

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)	RESULT
Total Aerobic Bacteria	100	ND	PASS
Total Yeast and Mold	10	ND	PASS

NOTES

1. Exclusions: QSP 1213 - Sample Certification: California Code

of Regulation Title 4 Division 19

2. Exclusions: QSP 1212 - Sample Certification: California Code

of Regulation Title 4 Division 19

3. Exclusions: Sample Certification: California Code of

Regulation Title 4 Division 19

