

Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DATE ISSUED 09/22/2021

SAMPLE NAME: cbdMD Full Spectrum 60 count 2000 mg Softgels

Infused, Hemp Infused

CULTIVATOR / MANUFACTURER

Business Name: License Number:

Address:

SAMPLE DETAIL

Batch Number: 12591D8 **Sample ID:** 210918R008

DISTRIBUTOR / TESTED FOR

Business Name: cbdMD License Number:

Date Collected: 09/18/2021 **Date Received:** 09/18/2021

Batch Size:

Sample Size: 1.0 units

Unit Mass: 33.8123 grams per Unit **Serving Size:** 0.5635 grams per Serving







Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: 54.708 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 CBD: 2379.541 mg/unit

Total CBD = Δ97HC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

 $Sum \ of \ Cannabinoids = \Delta 9 THC + THCa + CBD + CBDa + CBG + CBGa + Sum \ of \ Cannabinoids: 2563.750 \ mg/unit \ THCV + THCVa + CBC + CBCa + CBDV + CBDVa + \Delta 8 THC + CBL + CBN \ Total \ Cannabinoids = (\Delta 9 THC + 0.877*THCa) + (CBD + 0.877*CBDa) + (CBD + 0.8$

Total Cannabinoids = (Δ91HC+0.8//*1HCa) + (CBD+0.8//*CBDa) + (CBG+0.877*CBGa) + (THCV+0.877*THCVa) + (CBC+0.877*CBCa) +

Total Cannabinoids: 2563.750 mg/unit (CBDV+0.877*CBDVa) + \(\Delta \text{THCV+0.877*CBDVa} \) + \(\Delta \text{THCV-0.877*CBDVa} \) +

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.0849%

igoplus lpha Bisabolol 0.369 mg/g

Guaiol 0.168 mg/g

lacksquare eta Caryophyllene 0.114 mg/g

SAFETY ANALYSIS - SUMMARY

Pesticides: PASS

Mycotoxins: PASS

Residual Solvents: 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 approval of the laboratory.

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.

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

LQC verified by: Michael Pham Date: 09/22/2021 Approved by: Josh Wurzer, President





CBDMD FULL SPECTRUM 60 COUNT 2000 MG SOFTGELS | DATE ISSUED 09/22/2021

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: 54.708 mg/unit Total THC (Δ9THC+0.877*THCa)

TOTAL CBD: 2379.541 mg/unit

Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 2563.750 mg/unit

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

TOTAL CBG: 30.330 mg/unit

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 73.474 mg/unit

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 12.612 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 09/19/2021

	COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
	CBD	0.004 / 0.011	±3.3710	70.375	7.0375
	СВС	0.003/0.010	±0.0900	2.173	0.2173
	Δ9ΤΗС	0.002/0.014	±0.1141	1.618	0.1618
	CBG	0.002 / 0.006	±0.0558	0.897	0.0897
	CBDV	0.002/0.012	±0.0195	0.373	0.0373
	CBN	0.001/0.007	±0.0098	0.265	0.0265
	CBL	0.003 / 0.010	±0.0058	0.122	0.0122
	Δ8ΤΗC	0.01/0.02	N/A	ND	ND
nit-	THCV	0.002/0.012	N/A	ND	ND
111	THCVa	0.002/0.019	N/A	ND	ND
	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
	CBCa	0.001/0.015	N/A	ND	ND
	THCa	0.001 / 0.005	N/A	ND	ND
	SUM OF CANNAB	INOIDS		75.823 mg/g	7.5823%

Unit Mass: 33.8123 grams per Unit / Serving Size: 0.5635 grams per Serving

Δ9THC per Unit	I IVI	54.708 mg/unit
Δ9THC per Serving		0.912 mg/serving
Total THC per Unit		54.708 mg/unit
Total THC per Serving		0.912 mg/serving
CBD per Unit		2379.541 mg/unit
CBD per Serving		39.656 mg/serving
Total CBD per Unit		2379.541 mg/unit
Total CBD per Serving		39.656 mg/serving
Sum of Cannabinoids per Unit		2563.750 mg/unit
Sum of Cannabinoids per Serving		42.726 mg/serving
Total Cannabinoids per Unit		2563.750 mg/unit
Total Cannabinoids per Serving		42.725 mg/serving







CBDMD FULL SPECTRUM 60 COUNT 2000 MG SOFTGELS | DATE ISSUED 09/22/2021



Terpenoid Analysis

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

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



α Bisabolol

A sesquiterpene alcohol with a fragrance that can be described as floral, peppery, sweet and clean. Found in chamomile, figwort, yarrow, skullcaps, lavender, ironwort, germander...etc.



Guaiol

A sesquiterpene alcohol with a fragrance that can be described as floral, piney, herbal and woody. Found in guaiacum, cypress pine, ginseng, melaleuca, goatweed, incense grass...etc.



β Caryophyllene

A sesquiterpene with a fragrance that can be described as spicy, woody, dry, dusty and mildly sweet. It was one of the first organic compounds to fully synthesized in a laboratory and plays a role in the endocannabinoid system as it is a functional CB₂ receptor agonist. Found in black pepper, clove, hops, rosemary, black-jack, perilla, spicebush, Indian pennywort, celery, frankincense, vitex, parsley, marigold, tamarind...etc.

TERPENOID TEST RESULTS - 09/19/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
α Bisabolol	0.008 / 0.026	±0.0197	0.369	0.0369
Guaiol	0.009/0.030	±0.0079	0.168	0.0168
β Caryophyllene	0.004 / 0.012	±0.0041	0.114	0.0114
Caryophyllene Oxide	0.010 / 0.033	±0.0048	0.104	0.0104
α Humulene	0.009/0.029	±0.0020	0.063	0.0063
Nerolidol	0.009/0.028	±0.0019	0.031	0.0031
Borneol	0.005 / 0.016	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
trans-β-Farnesene	0.008 / 0.025	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Valencene	0.009/0.030	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
α Pinene	0.005 / 0.017	N/A	ND	ND
Camphene	0.005 / 0.015	N/A	ND	ND
Sabinene	0.004 / 0.014	N/A	ND	ND
β Pinene	0.004 / 0.014	N/A	ND	ND
Myrcene	0.008 / 0.025	N/A	ND	ND
α Phellandrene	0.006 / 0.020	N/A	ND	ND
3 Carene	0.005/0.018	N/A	ND	ND
αTerpinene	0.005/0.017	N/A	ND	ND
p-Cymene	0.005 / 0.016	N/A	ND	ND
Limonene	0.005/0.016	N/A	ND	ND
Eucalyptol	0.006/0.018	N/A	ND	ND
Ocimene	0.011/0.038	N/A	ND	ND
γTerpinene	0.006/0.018	N/A	ND	ND
Sabinene Hydrate	0.006 / 0.022	N/A	ND	ND
Fenchone	0.009/0.028	N/A	ND	ND
Terpinolene	0.008 / 0.026	N/A	ND	ND
Linalool	0.009/0.032	N/A	ND	ND
Fenchol	0.010 / 0.034	N/A	ND	ND
(-)-Isopulegol	0.005/0.016	N/A	ND	ND
Camphor	0.006/0.019	N/A	ND	ND
Isoborneol	0.004 / 0.012	N/A	ND	ND
Menthol	0.008 / 0.025	N/A	ND	ND
Terpineol	0.016 / 0.055	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
Cedrol	0.008 / 0.027	N/A	ND	ND
TOTAL TERPENOIDS			0.849 mg/g	0.0849%







CBDMD FULL SPECTRUM 60 COUNT 2000 MG SOFTGELS | DATE ISSUED 09/22/2021



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

PESTICIDE TEST RESULTS - 09/20/2021 PASS

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
lmazalil	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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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 - 09/20/2021 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
Spirotetramat	0.02 / 0.06	13	N/A	ND	PASS
Spiroxamine	0.03/0.08	≥LOD	N/A	ND	PASS
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).

Method: QSP 1212 - Analysis of Pesticides and Mycotoxins by

MYCOTOXIN TEST RESULTS - 09/19/2021 **⊘ PASS**

	COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (μg/kg)	MEASUREMENT UNCERTAINTY (μg/kg)	RESULT (µg/kg)	RESULT
	Aflatoxin B1	2.0 / 6.0	5	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	5	N/A	ND	PASS







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Residual Solvents Analysis

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

Method: QSP 1204 - Analysis of Residual Solvents by GC-MS

RESIDUAL SOLVENTS TEST RESULTS - 09/20/2021 **⊘** PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (μg/g)	RESULT
Propane	10/20	5000	N/A	ND	PASS
Butane	10/50	5000	N/A	ND	PASS
Pentane	20/50	5000	N/A	ND	PASS
Hexane	2/5	290	N/A	ND	PASS
Heptane	20/60	5000	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Toluene	7/21	890	N/A	ND	PASS
Total Xylenes	50 / 160	2170	N/A	ND	PASS
Methanol	50/200	3000	N/A	ND	PASS
Ethanol	20/50	5000	N/A	ND	PASS
Isopropyl Alcohol	10/40	5000	N/A	ND	PASS
Acetone	20/50	5000	N/A	ND	PASS
Ethyl ether	20/50	5000	N/A	ND	PASS
Ethylene Oxide	0.3 / 0.8	1	N/A	ND	PASS
Ethyl acetate	20/60	5000	N/A	ND	PASS
Chloroform	0.1 / 0.2	1	N/A	ND	PASS
Methylene chloride	0.3 / 0.9	1	N/A	ND	PASS
Trichloroethylene	0.1 / 0.3	1	N/A	ND	PASS
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Acetonitrile	2/7	410	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 - 09/19/2021 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





Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

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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

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

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

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

MICROBIOLOGY TEST RESULTS (PLATING) - 09/22/2021 PASS

MICROBIOLOGY TEST RESULTS (PCR) - 09/22/2021 PASS

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

NOTES

Sample Certification: Updated to meet California Code of Regulations Title 16

