

### **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 03/31/2021** 

#### SAMPLE NAME: 30ct 450mg Softgels

Infused, Non-Inhalable

**CULTIVATOR / MANUFACTURER** 

Business Name: License Number: Address:

SAMPLE DETAIL

Batch Number: 10771C1 Sample ID: 210325R031 **DISTRIBUTOR / TESTED FOR** 

Business Name: cbdMD License Number:

**Date Collected:** 03/25/2021 **Date Received:** 03/25/2021

Batch Size:

Sample Size: 1.0 units

Unit Mass: 0.6077 grams per Unit

Serving Size:





Scan QR code to verify authenticity of results.

#### **CANNABINOID ANALYSIS - SUMMARY**

**Total THC: Not Detected** 

Total CBD: 18.712 mg/unit

Sum of Cannabinoids: 18.997 mg/unit

Total Cannabinoids: 18.997 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 =  $\Delta$ 9THC + (THCa (0.877))

Total THC =  $\Delta$ 9THC + (THCa (0.877)) Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids =  $\Delta$ 9THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa +  $\Delta$ 8THC + CBL + CBN

$$\label{eq:total_control} \begin{split} & \mathsf{Total}\;\mathsf{Cannabinoids} = (\Delta 9\mathsf{THC} + 0.877^*\mathsf{THCa}) + (\mathsf{CBD} + 0.877^*\mathsf{CBDa}) + \\ & (\mathsf{CBG} + 0.877^*\mathsf{CBGa}) + (\mathsf{THCV} + 0.877^*\mathsf{THCVa}) + (\mathsf{CBC} + 0.877^*\mathsf{CBCa}) + \\ & (\mathsf{CBC} + 0.877^*\mathsf{CBCa}) + (\mathsf{CBC} + 0.877^*\mathsf{CBCa}) + (\mathsf{CBC} + 0.877^*\mathsf{CBCa}) + \\ & (\mathsf{CBC} + 0.877^*\mathsf{CBCa}) + (\mathsf{CBC} + 0$$

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

Moisture: NT

Density: NT

Viscosity: NT

**TERPENOID ANALYSIS - SUMMARY** 

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.0949%

Limonene 0.949 mg/g



Camphor <LOQ

#### **SAFETY ANALYSIS - SUMMARY**

∆9THC per Unit: **⊘PASS** 

Pesticides: PASS

Heavy Metals: PASS

Foreign Material: NT

Mycotoxins: PASS

Microbial Impurities (PCR): PASS

Water Activity: NT

Residual Solvents: PASS

Microbial Impurities (Plating): ND

Vitamin E: NT

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.

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

QC verified by: Kevin Flores Date: 03/31/2021

Approved by: Josh Wurzer, President Date: 03/31/2021



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# 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: 18.712 mg/unit

Total CBD (CBD+0.877\*CBDa)

TOTAL CANNABINOIDS: 18.997 mg/unit

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

TOTAL CBG: 0.184 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: 0.033 mg/unit

Total CBDV (CBDV+0.877\*CBDVa)

#### **CANNABINOID TEST RESULTS - 03/31/2021**

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	±1.4749	30.791	3.0791
CBG	0.002 / 0.006	±0.0188	0.302	0.0302
CBN	0.001 / 0.007	±0.0041	0.112	0.0112
CBDV	0.002 / 0.012	±0.0029	0.055	0.0055
Δ9ΤΗС	0.002 / 0.014	N/A	ND	ND
Δ8ΤΗС	0.01 / 0.02	N/A	ND	ND
THCa	0.001 / 0.005	N/A	ND	ND
THCV	0.002 / 0.012	N/A	ND	ND
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
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 CAN	NABINOIDS		31.260 mg/g	3.126%

#### Unit Mass: 0.6077 grams per Unit

Δ9THC per Unit	1120 per-package limit	ND	PASS
Total THC per Unit		ND	
CBD per Unit		18.712 mg/unit	
Total CBD per Unit		18.712 mg/unit	
Sum of Cannabinoids per Unit		18.997 mg/unit	
Total Cannabinoids per Unit		18.997 mg/unit	

MOISTURE TEST RESULT	DENSITY TEST RESULT	VISCOSITY TEST RESULT
Not Tested	Not Tested	Not Tested





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### **Terpenoid Analysis**

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

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



#### 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.



#### Camphor

A monoterpenoid ketone with a pungent fragrance that is as reminiscent of mothballs. It is commonly derived from Cinnamomum camphora, from which it lends its lame. It is a constituent of turpentine and has been used by certain cultures as an embalming fluid due to its antimicrobial effects. Found in camphor laurel, rosemary, East African camphorwood, goldenasters, coriander, feverfew, tarragon, nutmeg, sweet wormwood, yerba buena, mountain mint, hyssop, forskohlii, tansy, thyme, turmeric...etc.

#### TERPENOID TEST RESULTS - 03/28/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Limonene	0.005 / 0.016	±0.0136	0.949	0.0949
Camphor	0.006/0.019	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
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
Isoborneol	0.004 / 0.012	N/A	ND	ND
Borneol	0.005 / 0.016	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
β Caryophyllene	0.004 / 0.012	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	1.1117 0.020		0.949 mg/g	0.0949%





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### **Pesticide Analysis**

#### **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

### CATEGORY 1 PESTICIDE TEST RESULTS - 03/27/2021 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Aldicarb	0.03 / 0.08	≥LOD	N/A	ND	PASS
Carbofuran	0.02 / 0.05	≥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 / 0.07	≥LOD	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
Dimethoate	0.03 / 0.08	≥LOD	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
Fenoxycarb	0.03 / 0.08	≥LOD	N/A	ND	PASS
Fipronil	0.03 / 0.08	≥LOD	N/A	ND	PASS
lmazalil	0.02 / 0.06	≥LOD	N/A	ND	PASS
Methiocarb	0.02 / 0.07	≥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	0.03 / 0.09	≥LOD	N/A	ND	PASS
Spiroxamine	0.03 / 0.08	≥LOD	N/A	ND	PASS
Thiacloprid	0.03 / 0.10	≥LOD	N/A	ND	PASS

#### CATEGORY 2 PESTICIDE TEST RESULTS - 03/27/2021 PASS

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
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
Chlorantraniliprole	0.04 / 0.12	40	N/A	ND	PASS

Continued on next page





### **CERTIFICATE OF ANALYSIS**

30CT 450MG SOFTGELS | DATE ISSUED 03/31/2021



### **Pesticide Analysis** Continued

#### **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

#### CATEGORY 2 PESTICIDE TEST RESULTS - 03/27/2021 continued PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Clofentezine	0.03 / 0.09	0.5	N/A	ND	PASS
Cyfluthrin	0.12/0.38	1	N/A	ND	PASS
Cypermethrin	0.11/0.32	1	N/A	ND	PASS
Diazinon	0.02 / 0.05	0.2	N/A	ND	PASS
Dimethomorph	0.03 / 0.09	20	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
Fenpyroximate	0.02 / 0.06	2	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
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
Methomyl	0.03 / 0.10	0.1	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
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
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
Tebuconazole	0.02 / 0.07	2	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





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30CT 450MG SOFTGELS | DATE ISSUED 03/31/2021



### 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 - 03/27/2021 PASS

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (μg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (μg/kg)	RESULT
Aflatoxin B1	2.0 / 6.0		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



### 🔠 Residual Solvents Analysis

### **CATEGORY 1 AND 2 RESIDUAL SOLVENTS**

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

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

#### CATEGORY 1 RESIDUAL SOLVENTS TEST RESULTS - 03/27/2021 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (μg/g)	RESULT
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Chloroform	0.1 / 0.2	1	N/A	ND	PASS
Ethylene Oxide	0.3 / 0.8	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

#### CATEGORY 2 RESIDUAL SOLVENTS TEST RESULTS - 03/27/2021 PASS

Acetone	20/50	5000	N/A	ND	PASS
Acetonitrile	2/7	410	N/A	ND	PASS
Butane	10/50	5000	N/A	ND	PASS
Ethanol	20/50	5000	N/A	ND	PASS
Ethyl acetate	20/60	5000	N/A	ND	PASS
Ethyl ether	20/50	5000	N/A	ND	PASS
Heptane	20/60	5000	N/A	ND	PASS
Hexane	2/5	290	N/A	ND	PASS
Isopropyl Alcohol	10/40	5000	N/A	ND	PASS
Methanol	50/200	3000	N/A	ND	PASS
Pentane	20/50	5000	N/A	ND	PASS
Propane	10/20	5000	N/A	ND	PASS
Toluene	7/21	890	N/A	ND	PASS
Total Xylenes	50 / 160	2170	N/A	ND	PASS





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30CT 450MG SOFTGELS | DATE ISSUED 03/31/2021



### **Heavy Metals Analysis**

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

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

<b>HEAVY METALS TEST RESULTS</b> - 03/26/202	1 🕢	) 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

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

**Method:** QSP 6794 - Plating with  $3M^{TM}$  Petrifilm $^{TM}$ 

#### MICROBIAL IMPURITIES TEST RESULTS (PCR) - 03/28/2021 PASS

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing Escherichia coli	Detect	ND	PASS
Salmonella spp.	Detect	ND	PASS
Listeria monocytogenes		ND	

#### MICROBIAL IMPURITIES TEST RESULTS (PLATING) - 03/28/2021 ND

COMPOUND	(cfu/g)
Total Aerobic Bacteria	ND
Total Yeast and Mold	ND

