

Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DATE ISSUED 03/25/2021

SAMPLE NAME: cbdMD 30 count 1500 mg Sour Gummies

Infused, Non-Inhalable

CULTIVATOR / MANUFACTURER

Business Name: License Number:

Address:

SAMPLE DETAIL

Batch Number: S50G001 Sample ID: 210322P036 **DISTRIBUTOR / TESTED FOR**

Business Name: cbdMD License Number:

Date Collected: 03/22/2021 **Date Received:** 03/22/2021

Batch Size:

Sample Size: 1.0 units

Unit Mass: 4.1904 grams per Unit

Serving Size:





Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: Not Detected

Total CBD: 52.594 mg/unit

Sum of Cannabinoids: 52.879 mg/unit

Total Cannabinoids: 52.879 mg/unit

 $\label{thm:condition} \begin{tabular}{ll} Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step: $$ (a) $ (b) $ (b) $ (c) $$

Total THC = \triangle 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 + Δ 8THC + CBL + CBN

Total Cannabinoids = $(\Delta 9THC+0.877*THCa) + (CBD+0.877*CBDa) + (CBG+0.877*CBGa) + (THCV+0.877*THCVa) + (CBC+0.877*CBCa) + (CBC$

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

Moisture: NT

Density: NT

Viscosity: NT

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.0105%

Limonene 0.105 mg/g

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.

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

LOC verified by: Randi Vuong Date: 03/25/2021

Approved by: Josh Wurzer, President



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

Method: QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

TOTAL THC: Not DetectedTotal THC (Δ9THC+0.877*THCa)

TOTAL CBD: 52.594 mg/unit
Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 52.879 mg/unit

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

TOTAL CBG: 0.105 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: 0.088 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 03/23/2021

	COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Ī	CBD	0.004 / 0.011	±0.6012	12.551	1.2551
	CBG	0.002 / 0.006	±0.0016	0.025	0.0025
	CBN	0.001 / 0.007	±0.0008	0.022	0.0022
	CBDV	0.002/0.012	±0.0011	0.021	0.0021
	Δ9ΤΗC	0.002/0.014	N/A	ND	ND
	Δ8ΤΗC	0.01 / 0.02	N/A	ND	ND
	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 CANNAB	INOIDS	12.619 mg/g	1.2619%	

Unit Mass: 4.1904 grams per Unit

Δ9THC per Unit	1120 per-package limit	ND	PASS
Total THC per Unit		ND	
CBD per Unit		52.594 mg/unit	
Total CBD per Unit		52.594 mg/unit	
Sum of Cannabinoids per Unit		52.879 mg/unit	
Total Cannabinoids per Unit		52.879 mg/unit	

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













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.

TERPENOID TEST RESULTS - 03/24/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Limonene	0.005 / 0.016	±0.0015	0.105	0.0105
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
α Terpinene	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
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
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			0.105 mg/g	0.0105%







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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 - 03/24/2021 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
Imazalil	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 - 03/24/2021 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







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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 - 03/24/2021 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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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 - 03/24/2021 **⊘** 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 - 03/24/2021 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 - 03/24/2021 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	±6.3	167	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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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 - 03/23/2021 **⊘** 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[™] Petrifilm[™]

MICROBIAL IMPURITIES TEST RESULTS (PCR) - 03/25/2021 PASS

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

MICROBIAL IMPURITIES TEST RESULTS (PLATING) - 03/25/2021 ND

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

NOTES

Photograph provided by client.

