HEMP LABORATORY TEST

CERTIFICATE OF ANALYSIS

Hemp Analysis - Summary

Tested by high-performance liquid chromatography with ultraviolet detection (HPLC-UV).

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TOTAL THC[1]

Not Detected[2]

CANNABINOID PROFILE

3.084% Total CBD[1]

3.1262% Total Cannabinoids[3]

Terpenes See page 2

1) Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step: Total THC = Δ9THC + (THCa (0.877)) and Total CBD = CBD + (CBDa (0.877)).
2) As defined by the 2018 Farm Bill, hemp must contain no more than 0.3% Total THC, defined as the concentration of delta-9 tetrahydrocannabinol (Δ-9-THC) post-decarboxylation - see formula above.
3) Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.

Additional Testing

Pass/Fail defined at action limits set by California Code of Regulations Title 16. Effective date: January 16, 2019. Authority: Section 26013, Business Professions Code. Reference: Sections 26100, 26104, and 26110, Business Professions Code.

RESIDUAL PESTICIDES
PASSED

RESIDUAL SOLVENTS
PASSED

HEAVY METALS
PASSED

MICROBIAL IMPURITIES
PASSED

cbdMD Tincture 30 mL Mint 750 mg

Tested for: cbdMD

Address:

Batch #: 90412C5M

Sample ID: 191206Q021

Date Collected: 12/06/2019

Date Received: 12/06/2019

Final Approval

Josh Wurzer, President
Date: 12/11/2019

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. The uncertainty of measurement associated with the measurement result reported in this certificate is available from SC Laboratories upon request.

HEMP LABORATORY TEST
CERTIFICATE OF ANALYSIS

SC Laboratories, LLC
100 Pioneer Street, Suite E
Santa Cruz, CA 95060
(866) 435-0709 | sclabs.com

Sample Name:	cbdMD Tincture 30 mL Mint 750 mg
LIMS Sample ID:	191206Q021
Batch #:	90412C5M
Source Metrc ID(s):	
Sample Type:	Other
Batch Count:	
Sample Count:	
Unit Volume:	30 Milliliters per Unit
Serving Mass:	
Density:	0.9377 g/mL

Date Collected:	12/06/2019
Date Received:	12/06/2019
Tested for:	cbdMD
License #:	
Address:	
Produced by:	
License #:	
Address:	

Moisture Test Results

	Results (%)
Moisture	NT

Cannabinoid Test Results 12/09/2019

Cannabinoid analysis utilizing High Performance Liquid Chromatography (HPLC, QSP 5-4-4-4)

	mg/mL	%	LOD / LOQ mg/mL
Δ9THC	ND	ND	0.0009 / 0.003
Δ8THC	ND	ND	0.0009 / 0.003
THCa	ND	ND	0.0009 / 0.003
THCV	ND	ND	0.0004 / 0.001
THCVa	ND	ND	0.0013 / 0.004
CBD	28.919	3.0840	0.0009 / 0.003
CBDa	ND	ND	0.0009 / 0.003
CBDV	0.080	0.0085	0.0004 / 0.001
CBDVa	ND	ND	0.0003 / 0.001
CBG	0.252	0.0269	0.001 / 0.003
CBGa	ND	ND	0.0008 / 0.002
CBL	ND	ND	0.0021 / 0.006
CBN	0.063	0.0067	0.0009 / 0.003
CBC	ND	ND	0.0011 / 0.003
CBCa	ND	ND	0.0015 / 0.005
Sum of Cannabinoids:	**29.314**	**3.1262**	**879.420 mg/Unit**
Total THC (Δ9THC+0.877*THCa)	ND	ND	ND
Total CBD (CBD+0.877*CBDa)	28.919	3.084	867.570 mg/Unit

	Action Limit mg	
Δ9THC per Unit		ND
Δ9THC per Serving		

Batch Photo

Terpene Test Results 12/10/2019

Terpene analysis utilizing Gas Chromatography - Flame Ionization Detection (GC - FID)

	mg/g	%	LOD / LOQ mg/g
? Pinene	ND	ND	0.022 / 0.067
Camphene	ND	ND	0.027 / 0.08
Sabinene	ND	ND	0.027 / 0.082
? Pinene	ND	ND	0.027 / 0.081
Myrcene	ND	ND	0.027 / 0.082
? Phellandrene	ND	ND	0.037 / 0.111
3 Carene	ND	ND	0.029 / 0.087
? Terpinene	ND	ND	0.03 / 0.09
Limonene	0.590	0.0590	0.013 / 0.039
Eucalyptol	ND	ND	0.021 / 0.063
Ocimene	ND	ND	0.028 / 0.085
? Terpinene	ND	ND	0.03 / 0.09
Sabinene Hydrate	ND	ND	0.018 / 0.054
Fenchone	ND	ND	0.03 / 0.092
Terpinolene	ND	ND	0.022 / 0.067
Linalool	ND	ND	0.019 / 0.058
Fenchol	ND	ND	0.023 / 0.069
(-)-Isopulegol	ND	ND	0.013 / 0.04
Camphor	ND	ND	0.054 / 0.163
Isoborneol	ND	ND	0.033 / 0.101
Borneol	ND	ND	0.048 / 0.146
Menthol	ND	ND	0.022 / 0.067
Terpineol	ND	ND	0.022 / 0.068
Nerol	ND	ND	0.023 / 0.068
R-(+)-Pulegone	ND	ND	0.022 / 0.068
Geraniol	ND	ND	0.017 / 0.05
Geranyl Acetate	ND	ND	0.016 / 0.048
? Cedrene	ND	ND	0.017 / 0.051
? Caryophyllene	ND	ND	0.018 / 0.054
? Humulene	ND	ND	0.013 / 0.038
Valencene	ND	ND	0.008 / 0.023
Nerolidol	ND	ND	0.035 / 0.106
Caryophyllene Oxide	ND	ND	0.028 / 0.084
Guaiol	ND	ND	0.022 / 0.066
Cedrol	ND	ND	0.029 / 0.086
? Bisabolol	ND	ND	0.017 / 0.051
Total Terpene Concentration:	**0.590**	**0.059**	

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.

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Sample must be marked as public to be viewable

Josh Wurzer, President
Date: 12/11/2019

HEMP LABORATORY TEST

CERTIFICATE OF ANALYSIS

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Sample Name:	cbdMD Tincture 30 mL Mint 750 mg
LIMS Sample ID:	191206Q021
Batch #:	90412C5M
Source Metrc ID(s):	
Sample Type:	Other
Batch Count:	
Sample Count:	
Unit Volume:	30 Milliliters per Unit
Serving Mass:	
Density:	0.9377 g/mL

Date Collected:	12/06/2019
Date Received:	12/06/2019
Tested for:	cbdMD
License #:	
Address:	
Produced by:	
License #:	
Address:	

Pesticide Test Results - Pass 12/11/2019

Pesticide, Fungicide and plant growth regulator analysis utilizing HPLC-Mass Spectrometry and GC-Mass Spectrometry

		Results (µg/g)	Action Limit µg/g	LOD / LOQ µg/g
Abamectin	Pass	ND	0.3	0.030 / 0.091
Acephate	Pass	ND	5.0	0.013 / 0.039
Acequinocyl	Pass	ND	4.0	0.010 / 0.031
Acetamiprid	Pass	ND	5.0	0.013 / 0.038
Azoxystrobin	Pass	ND	40.0	0.015 / 0.047
Bifenazate	Pass	ND	5.0	0.012 / 0.035
Bifenthrin	Pass	ND	0.5	0.013 / 0.038
Boscalid	Pass	ND	10.0	0.008 / 0.023
Captan	Pass	ND	5.0	0.099 / 0.300
Carbaryl	Pass	ND	0.5	0.014 / 0.043
Chlorantraniliprole	Pass	ND	40.0	0.020 / 0.061
Clofentezine	Pass	ND	0.5	0.009 / 0.027
Cyfluthrin	Pass	ND	1.0	0.099 / 0.299
Cypermethrin	Pass	ND	1.0	0.030 / 0.091
Diazinon	Pass	ND	0.2	0.009 / 0.027
Dimethomorph	Pass	ND	20.0	0.018 / 0.055
Etoxazole	Pass	ND	1.5	0.007 / 0.022
Fenhexamid	Pass	ND	10.0	0.015 / 0.045
Fenpyroximate	Pass	ND	2.0	0.012 / 0.036
Flonicamid	Pass	ND	2.0	0.022 / 0.066
Fludioxonil	Pass	ND	30.0	0.020 / 0.061
Hexythiazox	Pass	ND	2.0	0.009 / 0.027
Imidacloprid	Pass	ND	3.0	0.017 / 0.050
Kresoxim-methyl	Pass	ND	1.0	0.010 / 0.029
Malathion	Pass	ND	5.0	0.006 / 0.019
Metalaxyl	Pass	ND	15.0	0.011 / 0.033
Methomyl	Pass	ND	0.1	0.022 / 0.067
Myclobutanil	Pass	ND	9.0	0.015 / 0.044
Naled	Pass	ND	0.5	0.010 / 0.031
Oxamyl	Pass	ND	0.2	0.014 / 0.042
Pentachloronitrobenzene	Pass	ND	0.2	0.020 / 0.061
Permethrin	Pass	ND	20.0	0.027 / 0.082
Phosmet	Pass	ND	0.2	0.010 / 0.030
Piperonylbutoxide	Pass	ND	8.0	0.007 / 0.020
Prallethrin	Pass	ND	0.4	0.011 / 0.032
Propiconazole	Pass	ND	20.0	0.004 / 0.013
Pyrethrins	Pass	ND	1.0	0.012 / 0.036
Pyridaben	Pass	ND	3.0	0.007 / 0.020
Spinetoram	Pass	ND	3.0	0.006 / 0.017
Spinosad	Pass	ND	3.0	0.010 / 0.031
Spiromesifen	Pass	ND	12.0	0.005 / 0.015
Spirotetramat	Pass	ND	13.0	0.014 / 0.042
Tebuconazole	Pass	ND	2.0	0.006 / 0.018
Thiamethoxam	Pass	ND	4.5	0.011 / 0.033
Trifloxystrobin	Pass	ND	30.0	0.007 / 0.020

Pesticide Test Results - Pass 12/11/2019

Pesticide, Fungicide and plant growth regulator analysis utilizing HPLC-Mass Spectrometry and GC-Mass Spectrometry

		Results (µg/g)	Action Limit µg/g	LOD / LOQ µg/g
Aldicarb	Pass	ND	ND	0.030 / 0.091
Carbofuran	Pass	ND	ND	0.029 / 0.089
Chlordane	Pass	ND	ND	0.032 / 0.097
Chlorfenapyr	Pass	ND	ND	0.030 / 0.090
Chlorpyrifos	Pass	ND	ND	0.029 / 0.089
Coumaphos	Pass	ND	ND	0.029 / 0.089
Daminozide	Pass	ND	ND	0.030 / 0.091
DDVP (Dichlorvos)	Pass	ND	ND	0.029 / 0.089
Dimethoate	Pass	ND	ND	0.029 / 0.089
Ethoprop(hos)	Pass	ND	ND	0.029 / 0.089
Etofenprox	Pass	ND	ND	0.029 / 0.089
Fenoxycarb	Pass	ND	ND	0.029 / 0.089
Fipronil	Pass	ND	ND	0.029 / 0.089
Imazalil	Pass	ND	ND	0.029 / 0.089
Methiocarb	Pass	ND	ND	0.029 / 0.089
Methyl parathion	Pass	ND	ND	0.029 / 0.089
Mevinphos	Pass	ND	ND	0.029 / 0.089
Paclobutrazol	Pass	ND	ND	0.029 / 0.089
Propoxur	Pass	ND	ND	0.029 / 0.089
Spiroxamine	Pass	ND	ND	0.029 / 0.089
Thiacloprid	Pass	ND	ND	0.029 / 0.089

Mycotoxin Test Results

Mycotoxin analysis utilizing HPLC-Mass Spectrometry

	Results (µg/kg)	Action Limit µg/kg	LOD / LOQ µg/kg
Aflatoxin B1, B2, G1, G2	NT		
Ochratoxin A	NT		

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Batch #:	90412C5M
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Sample Type:	Other
Batch Count:	
Sample Count:	
Unit Volume:	30 Milliliters per Unit
Serving Mass:	
Density:	0.9377 g/mL

Date Collected:	12/06/2019
Date Received:	12/06/2019
Tested for:	cbdMD
License #:	
Address:	
Produced by:	
License #:	
Address:	

Residual Solvent Test Results - Pass — 12/08/2019

Residual Solvent analysis utilizing Gas Chromatography - Mass Spectrometry (GC - MS)

		Results (µg/g)	Action Limit µg/g	LOD / LOQ µg/g
1,2-Dichloroethane		NT		
Benzene		NT		
Chloroform		NT		
Ethylene Oxide		NT		
Methylene chloride		NT		
Trichloroethylene		NT		
Acetone	Pass	ND	5000.0	14.703 / 44.549
Acetonitrile	Pass	ND	410.0	2.727 / 8.262
Butane	Pass	ND	5000.0	5.672 / 17.185
Ethanol	Pass	ND	5000.0	11.775 / 35.679
Ethyl acetate	Pass	ND	5000.0	16.227 / 49.169
Ethyl ether	Pass	ND	5000.0	11.608 / 35.172
Heptane	Pass	ND	5000.0	12.982 / 39.336
Hexane	Pass	ND	290.0	1.816 / 5.502
Isopropyl Alcohol	Pass	ND	5000.0	15.358 / 46.536
Methanol	Pass	ND	3000.0	15.584 / 47.220
Pentane	Pass	ND	5000.0	12.355 / 37.434
Propane	Pass	ND	5000.0	1.359 / 4.117
Toluene	Pass	ND	890.0	7.174 / 21.736
Total Xylenes	Pass	ND	2170.0	34.438 / 104.347

Microbiological Test Results - Pass — 12/09/2019

PCR and fluorescence detection of microbiological impurities

		Results	Action Limit
Shiga toxin-producing Escherichia coli	Pass	ND	ND
Salmonella spp.	Pass	ND	ND
Aspergillus fumigatus		NT	
Aspergillus flavus		NT	
Aspergillus niger		NT	
Aspergillus terreus		NT	

3M Petrifilm and plate counts for microbiological contamination

	Results (cfu/g)
Aerobic Plate Count	NT
Total Yeast and Mold	NT

Foreign Material Test Results

NT

Water Activity Test Results

	Results (Aw)	Action Limit Aw
Water Activity	NT	

Heavy Metal Test Results - Pass — 12/09/2019

Heavy metal analysis utilizing Inductively Coupled Plasma Mass Spectrometry (ICP-MS)

		Results (µg/g)	Action Limit µg/g	LOD / LOQ µg/g
Cadmium	Pass	ND	0.5	0.012 / 0.035
Lead	Pass	ND	0.5	0.031 / 0.095
Arsenic	Pass	ND	1.5	0.013 / 0.039
Mercury	Pass	ND	3.0	0.002 / 0.005

Note

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Date: 12/11/2019

 ISO/IES 17025 : 2005 Accredited PJLA Accreditation Number 87168