

# HEMP LABORATORY TEST CERTIFICATE OF ANALYSIS



## Hemp Analysis - Summary

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

### TOTAL THC<sup>1</sup>

# Not Detected<sup>2</sup>

### CANNABINOID PROFILE

19.2766% Total CBD<sup>1</sup>

19.3949% Total Cannabinoids<sup>3</sup>

Terpenes See page 2



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- 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 =  $\Delta 9\text{THC} + (\text{THCa} (0.877))$  and Total CBD =  $\text{CBD} + (\text{CBDa} (0.877))$ .
- 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 ( $\Delta$ -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 SOLVENTS

**PASSED**

### MICROBIAL IMPURITIES

**PASSED**

## cbdMD Tincture 30 mL Natural 5000 mg

Tested for: cbdMD

Address:

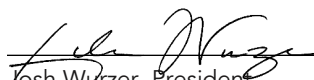
Batch #: 90412C8N

Sample ID: 191206Q011

Date Collected: 12/06/2019

Date Received: 12/06/2019

## Final Approval

  
Josh Wurzer, President  
Date: 12/18/2019

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.



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

Sample Name: cbdMD Tincture 30 mL Natural 5000 mg  
LIMS Sample ID: 191206Q011  
Batch #: 90412C8N  
Source Metr ID(s):  
  
Sample Type: Other  
Batch Count:  
Sample Count:  
Unit Volume: 30 Milliliters per Unit  
Serving Mass:  
Density: 0.9508 g/mL

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

## Moisture Test Results

Moisture Results (%)  
ND

## Cannabinoid Test Results 12/18/2019

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	183.282	19.2766	0.0009 / 0.003
CBDa	ND	ND	0.0009 / 0.003
CBDV	0.519	0.0546	0.0004 / 0.001
CBDVa	ND	ND	0.0003 / 0.001
CBG	0.490	0.0515	0.001 / 0.003
CBGa	ND	ND	0.0008 / 0.002
CBL	ND	ND	0.0021 / 0.006
CBN	0.116	0.0122	0.0009 / 0.003
CBC	ND	ND	0.0011 / 0.003
CBCa	ND	ND	0.0015 / 0.005

**Sum of Cannabinoids: 184.407 19.3949 5532.210 mg/Unit**  
Total THC (Δ9THC+0.877\*THCa) ND ND  
Total CBD (CBD+0.877\*CBDa) 183.282 19.2766 5498.460 mg/Unit

Δ9THC per Unit ND  
Δ9THC per Serving ND

## 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	0.635	0.0635	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	<LOQ	<LOQ	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

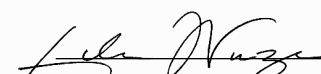
**Total Terpene Concentration: 0.635 0.0635**

## 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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Josh Wurzer, President  
Date: 12/18/2019



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Sample Type: Other  
Batch Count:  
Sample Count:  
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Serving Mass:  
Density: 0.9508 g/mL

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Tested for: cbdMD  
License #:  
Address:  
Produced by:  
License #:  
Address:

## Pesticide Test Results

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	NT		
Acephate	NT		
Acequinocyl	NT		
Acetamiprid	NT		
Azoxystrobin	NT		
Bifenazate	NT		
Bifenthrin	NT		
Boscalid	NT		
Captan	NT		
Carbaryl	NT		
Chlorantraniliprole	NT		
Clofentezine	NT		
Cyfluthrin	NT		
Cypermethrin	NT		
Diazinon	NT		
Dimethomorph	NT		
Etoxazole	NT		
Fenhexamid	NT		
Fenpyroximate	NT		
Fonicamid	NT		
Fludioxonil	NT		
Hexythiazox	NT		
Imidacloprid	NT		
Kresoxim-methyl	NT		
Malathion	NT		
Metalaxyl	NT		
Methomyl	NT		
Myclobutanil	NT		
Naled	NT		
Oxamyl	NT		
Pentachloronitrobenzene	NT		
Permethrin	NT		
Phosmet	NT		
Piperonylbutoxide	NT		
Prallethrin	NT		
Propiconazole	NT		
Pyrethrins	NT		
Pyridaben	NT		
Spinetoram	NT		
Spinosad	NT		
Spiromesifen	NT		
Spirotetramat	NT		
Tebuconazole	NT		
Thiamethoxam	NT		
Trifloxystrobin	NT		

## Pesticide Test Results

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	NT		
Carbofuran	NT		
Chlordane	NT		
Chlorfenapyr	NT		
Chlorpyrifos	NT		
Coumaphos	NT		
Daminozide	NT		
DDVP (Dichlorvos)	NT		
Dimethoate	NT		
Ethoprop(hos)	NT		
Etofenprox	NT		
Fenoxycarb	NT		
Fipronil	NT		
Imazalil	NT		
Methiocarb	NT		
Methyl parathion	NT		
Mevinphos	NT		
Padlobutrazol	NT		
Propoxur	NT		
Spiroxamine	NT		
Thiacloprid	NT		

## 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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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

Water Activity	Results (Aw)	Action Limit Aw
	NT	

## Heavy Metal Test Results

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

	Results (µg/g)	Action Limit µg/g	LOD / LOQ µg/g
Cadmium	NT		
Lead	NT		
Arsenic	NT		
Mercury	NT		

## Note

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