

HEMP LABORATORY TEST CERTIFICATE OF ANALYSIS



Hemp Analysis - Summary

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

TOTAL THC¹

0.0049%²

CANNABINOID PROFILE

8.9097% Total CBD¹

8.9482% Total Cannabinoids³

Terpenes Not Tested



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 (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.

2500 mg broad spectrum mint tincture

Tested for: **Medical MARY**
Address:  THE NEW SCIENCE OF CBD/HEMP

Sample ID: 200129N014

Date Collected: 01/29/2020

Date Received: 01/29/2020

Batch #: 2002802

Final Approval


Josh Wurzer, President
Date: 01/30/2020

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

Sample Name: 2500 mg broad spectrum mint tincture

LIMS Sample ID: 200129N014

Batch #: 2002802

Source METRC UID:

Sample Type: Other

Batch Count:

Sample Count: 10 Unit(s)

Unit Volume: 30 Milliliters per Unit

Serving Mass:

Density: 0.9419 g/mL

Date Collected: 01/29/2020

Date Received: 01/29/2020

Tested for:

License #:

Address:

Produced by:

License #:

Address:



Moisture Test Results

	Results (%)
Moisture	NT

Cannabinoid Test Results

01/30/2020

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

	mg/mL	%	LOD / LOQ mg/mL
Δ9THC	0.046	0.0049	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	83.920	8.9097	0.0009 / 0.003
CBDa	ND	ND	0.0009 / 0.003
CBDV	0.295	0.0313	0.0004 / 0.001
CBDVa	ND	ND	0.0003 / 0.001
CBG	0.009	0.0010	0.001 / 0.003
CBGa	ND	ND	0.0008 / 0.002
CBL	<LOQ	<LOQ	0.0021 / 0.006
CBN	<LOQ	<LOQ	0.0009 / 0.003
CBC	0.013	0.0014	0.0011 / 0.003
CBCa	ND	ND	0.0015 / 0.005

Sum of Cannabinoids:	84.283	8.9482	2528.490 mg/Unit
Total THC (Δ9THC+0.877*THCa)	0.046	0.0049	1.380 mg/Unit
Total CBD (CBD+0.877*CBDa)	83.920	8.9097	2517.600 mg/Unit

Δ9THC per Unit
Δ9THC per Serving
Action Limit mg
1.380 mg/Unit

Batch Photo



Terpene Test Results

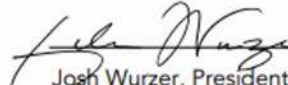
Terpene analysis utilizing Gas Chromatography - Flame Ionization Detection (GC - FID)

	mg/g	%	LOD / LOQ mg/g
α Bisabolol	NT		
α Pinene	NT		
β Carene	NT		
Borneol	NT		
β Caryophyllene	NT		
Geraniol	NT		
α Humulene	NT		
Terpinolene	NT		
Valencene	NT		
Menthol	NT		
Nerolidol	NT		
Camphene	NT		
Eucalyptol	NT		
α Cedrene	NT		
Camphor	NT		
(-)-Isopulegol	NT		
Sabinene	NT		
γ Terpinene	NT		
α Terpinene	NT		
Linalool	NT		
Limonene	NT		
Myrcene	NT		
Fenchol	NT		
α Phellandrene	NT		
Caryophyllene Oxide	NT		
Terpineol	NT		
β Pinene	NT		
R-(+)-Pulegone	NT		
Geranyl Acetate	NT		
Citronellol	NT		
p-Cymene	NT		
Ocimene	NT		
Guaiol	NT		
Phytol	NT		
Isoborneol	NT		

Total Terpene Concentration: NT

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.


Josh Wurzer, President
Date: 01/30/2020



HEMP LABORATORY TEST CERTIFICATE OF ANALYSIS

Sample Name: 2500 mg Broad Spectrum mint

LIMS Sample ID: 200204N006

Batch #: 2002802

Source METRC UID:

Sample Type: Other

Batch Count:

Sample Count:

Unit Volume: 30 Milliliters per Unit

Serving Mass:

Date Collected: 02/04/2020

Date Received: 02/04/2020

Tested for:

License #:

Address:

Produced by:



License #:

Address:

Residual Solvent Test Results

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	NT		
Acetonitrile	NT		
Butane	NT		
Ethanol	NT		
Ethyl acetate	NT		
Ethyl ether	NT		
Heptane	NT		
Hexane	NT		
Isopropyl Alcohol	NT		
Methanol	NT		
Pentane	NT		
Propane	NT		
Toluene	NT		
Total Xylenes	NT		

Microbiological Test Results - Pass

02/05/2020

PCR and fluorescence detection of microbiological impurities

	Pass	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 - Pass

02/06/2020

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

	Pass	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

Sample Certification

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Josh Wurzer, President
 Date: 02/06/2020



HEMP LABORATORY TEST CERTIFICATE OF ANALYSIS

Sample Name: 2500 mg Broad Spectrum mint

LIMS Sample ID: 200204N006

Batch #: 2002802

Source METRC UID:

Sample Type: Other

Batch Count:

Sample Count:

Unit Volume: 30 Milliliters per Unit

Serving Mass:

Date Collected: 02/04/2020

Date Received: 02/04/2020

Tested for:

License #:

Address:

Produced by:

License #:

Address:



Pesticide Test Results - Pass 02/05/2020

Pesticide 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
Fonicamid	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 02/05/2020

Pesticide 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
Pacllobutrazol	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		

Sample Certification

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 Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

Josh Wurzer, President
 Date: 02/06/2020