

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 THC¹

PASSED² Not Detected

CANNABINOID PROFILE

5.4229% Total CBD¹

5.4493% Total Cannabinoids³

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 = $\Delta^9\text{THC} + (\text{THCa} (0.877))$ 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 ($\Delta^9\text{-THC}$) 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

HEAVY METALS

PASSED

Natural Hemp - 1,500MG

Tested for: Core CBD

Address:

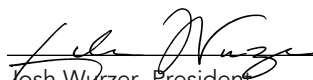
Batch #:

Sample ID: 191003U005

Date Collected: 10/03/2019

Date Received: 10/03/2019

Final Approval


Josh Wurzer, President
Date: 10/05/2019

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: Natural Hemp - 1,500MG
LIMS Sample ID: 191003U005
Batch #:
Sample Metric ID:
Sample Type: Tincture, Other
Batch Count:
Sample Count:
Unit Mass: 27.849 Grams per Unit
Serving Mass:
Density: 0.9283 g/mL

Date Collected: 10/03/2019
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Tested for: Core CBD
License #:
Address:
Produced by:
License #:
Address:

Overall result for batch: Pass

Moisture Test Results

Moisture	Results (%)
	NT

Water Activity Test Results

Water Activity	Results (Aw)	Action Limit Aw
	NT	

Cannabinoid Test Results

10/05/2019

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

	mg/g	%	LOD / LOQ mg/g
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	54.229	5.4229	0.0009 / 0.003
CBDa	ND	ND	0.0009 / 0.003
CBDV	0.264	0.0264	0.0004 / 0.001
CBDVa	ND	ND	0.0003 / 0.001
CBG	ND	ND	0.001 / 0.003
CBGa	ND	ND	0.0008 / 0.002
CBL	ND	ND	0.0021 / 0.006
CBN	ND	ND	0.0009 / 0.003
CBC	ND	ND	0.0011 / 0.003
CBCa	ND	ND	0.0015 / 0.005
Sum of Cannabinoids:	54.493	5.4493	1517.576 mg/Unit
Total THC (Δ9THC+0.877*THCa)	ND	ND	ND
Total CBD (CBD+0.877*CBDa)	54.229	5.4229	1510.223 mg/Unit

Δ9THC per Unit
Δ9THC per Serving

Action Limit mg **ND**

Batch Photo



Terpene Test Results

10/05/2019

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	ND	ND	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	<LOQ	<LOQ	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	<LOQ	<LOQ	0.028 / 0.084
Guaiol	<LOQ	<LOQ	0.022 / 0.066
Cedrol	ND	ND	0.029 / 0.086
Bisabolol	ND	ND	0.017 / 0.051

Total Terpene Concentration: <LOQ

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
Josh Wurzer, President
Date: 10/05/2019



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Sample Metric ID:
Sample Type: Tincture, Other
Batch Count:
Sample Count:
Unit Mass: 27.849 Grams per Unit
Serving Mass:
Density: 0.9283 g/mL

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Produced by:
License #:
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Overall result for batch: Pass

Pesticide Test Results - Pass

10/05/2019

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

		Results (µg/g)	Action Limit µg/g	Reporting Limit µg/g
Abamectin	Pass	ND	0.3	0.091
Bifenazate	Pass	ND	5.0	0.035
Bifenthrin	Pass	ND	0.5	0.038
Boscalid	Pass	ND	10.0	0.023
Etoxazole	Pass	ND	1.5	0.022
Imidacloprid	Pass	ND	3.0	0.050
Myclobutanil	Pass	ND	9.0	0.044
Piperonylbutoxide	Pass	ND	8.0	0.020
Pyrethrins	Pass	ND	1.0	0.036
Spinosad	Pass	ND	3.0	0.031
Spiromesifen	Pass	ND	12.0	0.015
Spirotetramat	Pass	ND	13.0	0.042

Heavy Metal Test Results - Pass

10/04/2019

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

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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Produced by:
License #:
Address:

Overall result for batch: Pass

Residual Solvent Test Results

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	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		

Note

Microbiological Test Results

PCR and fluorescence detection of microbiological impurities

	Results	Action Limit
Shiga toxin-producing Escherichia coli	NT	
Salmonella spp.	NT	
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

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