

# 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>

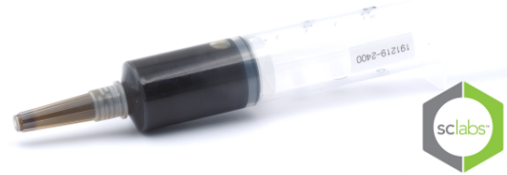
**0.3164%<sup>2</sup>**

CANNABINOID PROFILE

**8.2243%** Total CBD<sup>1</sup>

**9.1233%** 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 PESTICIDES

**PASSED**

RESIDUAL SOLVENTS

**PASSED**

HEAVY METALS

**PASSED**

MICROBIAL IMPURITIES

**PASSED**

191219-2400

**Tested for:** New York Hemp Oil

**Address:**

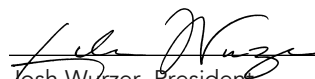
**Batch #:**

**Sample ID:** 191229K011

**Date Collected:** 12/28/2019

**Date Received:** 12/29/2019

## Final Approval

  
Josh Wurzer, President  
Date: 01/01/2020

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

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

Sample Name: 191219-2400  
LIMS Sample ID: 191229K011  
Batch #:  
Source Metr ID(s):  
  
Sample Type: Other  
Batch Count:  
Sample Count:  
Unit Mass:  
Serving Mass:  
Density: 0.9472 g/mL

Date Collected: 12/28/2019  
Date Received: 12/29/2019  
Tested for: New York Hemp Oil  
  
License #:  
Address:  
  
Produced by:  
  
License #:  
Address:

## Moisture Test Results

Moisture **Results (%)**  
NT

## Cannabinoid Test Results

12/30/2019

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

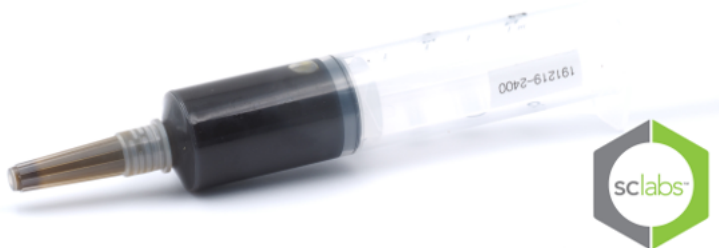
	mg/mL	%	LOD / LOQ mg/mL
Δ9THC	2.997	0.3164	0.0009 / 0.003
Δ8THC	ND	ND	0.0009 / 0.003
THCa	ND	ND	0.0009 / 0.003
THCV	ND	ND	0.0004 / 0.001
THCVa	ND	ND	0.0013 / 0.004
CBD	74.775	7.8943	0.0009 / 0.003
CBDa	3.564	0.3763	0.0009 / 0.003
CBDV	0.429	0.0453	0.0004 / 0.001
CBDVa	ND	ND	0.0003 / 0.001
CBG	1.482	0.1565	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	3.054	0.3224	0.0011 / 0.003
CBCa	0.115	0.0121	0.0015 / 0.005

**Sum of Cannabinoids: 86.416 9.1233**  
Total THC (Δ9THC+0.877\*THCa) 2.997 0.3164  
Total CBD (CBD+0.877\*CBDa) 77.901 8.2243

Action Limit mg

Δ9THC per Unit  
Δ9THC per Serving

## Batch Photo



## Terpene Test Results

12/31/2019

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	0.097	0.0097	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	<LOQ	<LOQ	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	0.648	0.0648	0.018 / 0.054
Humulene	0.239	0.0239	0.013 / 0.038
Valencene	ND	ND	0.008 / 0.023
Nerolidol	<LOQ	<LOQ	0.035 / 0.106
Caryophyllene Oxide	<LOQ	<LOQ	0.028 / 0.084
Guaiol	0.156	0.0156	0.022 / 0.066
Cedrol	ND	ND	0.029 / 0.086
Bisabolol	0.428	0.0428	0.017 / 0.051

**Total Terpene Concentration: 1.568 0.1568**

## 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: 01/01/2020



**HEMP LABORATORY TEST  
CERTIFICATE OF ANALYSIS**

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LIMS Sample ID: 191229K011  
Batch #:  
Source Metric ID(s):  
  
Sample Type: Other  
Batch Count:  
Sample Count:  
Unit Mass:  
Serving Mass:  
Density: 0.9472 g/mL

Date Collected: 12/28/2019  
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Tested for: New York Hemp Oil  
  
License #:  
Address:  
  
Produced by:  
  
License #:  
Address:

**Pesticide Test Results - Pass**

**12/30/2019**

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

**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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License #:  
Address:  
  
Produced by:  
  
License #:  
Address:

## Residual Solvent Test Results - Pass

12/30/2019

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

	Results (µg/g)	Action Limit µg/g	LOD / LOQ µg/g
1,2-Dichloroethane	Pass ND	1.0	0.111 / 0.336
Benzene	Pass ND	1.0	0.043 / 0.132
Chloroform	Pass ND	1.0	0.064 / 0.195
Ethylene Oxide	Pass ND	1.0	0.136 / 0.413
Methylene chloride	Pass ND	1.0	0.172 / 0.521
Trichloroethylene	Pass ND	1.0	0.040 / 0.120
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 217.418	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

12/30/2019

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 - Pass

01/01/2020

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 <LOQ	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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