

HEMP LABORATORY TEST CERTIFICATE OF ANALYSIS



Hemp Analysis - Summary

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

TOTAL THC¹

0.0585%²

CANNABINOID PROFILE

2.3306% Total CBD¹

2.5141% Total Cannabinoids³

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 (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

MICROBIAL IMPURITIES

PASSED

RESIDUAL SOLVENTS

PASSED

200mg CBD Roll On - 19322

Tested for: Can Be Done

Address: CA

Batch #:

Sample ID: 200130S017

Date Collected: 01/30/2020

Date Received: 01/30/2020

Final Approval

Michael Pham, LQC Verified By
Date: 02/12/2020

Josh Wurzer, President
Date: 02/12/2020

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.



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

Sample Name: 200mg CBD Roll On - 19322

LIMS Sample ID: 200130S017

Batch #:

Source METRC UID:

Sample Type: Other

Batch Count:

Sample Count:

Unit Volume: 10 Milliliters per Unit

Serving Mass:

Density: 0.9322 g/mL

Date Collected: 01/30/2020

Date Received: 01/30/2020

Tested for: Can Be Done

License #:

Address: CA

Produced by:

License #:

Address:

Moisture Test Results

Moisture Results (%)
NT

Cannabinoid Test Results

02/02/2020

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

	mg/mL	%	LOD / LOQ mg/mL
Δ9THC	0.545	0.0585	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	21.687	2.3264	0.0009 / 0.003
CBDa	0.045	0.0048	0.0009 / 0.003
CBDV	0.096	0.0103	0.0004 / 0.001
CBDVa	ND	ND	0.0003 / 0.001
CBG	0.314	0.0337	0.001 / 0.003
CBGa	ND	ND	0.0008 / 0.002
CBL	0.018	0.0019	0.0021 / 0.006
CBN	<LOQ	<LOQ	0.0009 / 0.003
CBC	0.731	0.0784	0.0011 / 0.003
CBCa	ND	ND	0.0015 / 0.005

Sum of Cannabinoids:	23.436	2.5141	234.360 mg/Unit
Total THC (Δ9THC+0.877*THCa)	0.545	0.0585	5.450 mg/Unit
Total CBD (CBD+0.877*CBDa)	21.726	2.3306	217.260 mg/Unit

Δ9THC per Unit: 5.450 mg/Unit
 Δ9THC per Serving: Action Limit mg

Batch Photo



Terpene Test Results

02/04/2020

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	<LOQ	<LOQ	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	<LOQ	<LOQ	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	0.339	0.0339	0.018 / 0.054
Humulene	0.098	0.0098	0.013 / 0.038
Valencene	0.029	0.0029	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	0.189	0.0189	0.017 / 0.051

Total Terpene Concentration: 0.655 0.0655

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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Michael Pham

Michael Pham, LQC Verified By
 Date: 02/12/2020

Josh Wurzer

Josh Wurzer, President
 Date: 02/12/2020



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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		

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Michael Pham

Michael Pham, LQC Verified By
Date: 02/12/2020

Josh Wurzer

Josh Wurzer, President
Date: 02/12/2020



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Tested for: Can Be Done

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Address: CA

Produced by:

License #:

Address:

Residual Solvent Test Results - Pass

02/05/2020

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 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

02/05/2020

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	Pass ND	ND
Aspergillus flavus	Pass ND	ND
Aspergillus niger	Pass ND	ND
Aspergillus terreus	Pass ND	ND

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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