

HEMP LABORATORY TEST CERTIFICATE OF ANALYSIS



Hemp Analysis - Summary

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

TOTAL THC¹

0.005%²

CANNABINOID PROFILE

0.1859% Total CBD¹

0.2297% 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 ($\Delta^9\text{-THC}$) 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

RESIDUAL SOLVENTS

PASSED

HEAVY METALS

PASSED

MICROBIAL IMPURITIES

See page 4

Serene Whole Flower Hemp CBD Spray

Tested for: Brizo Pure

Address:

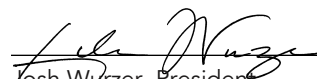
Batch #:

Sample ID: 191226R006

Date Collected: 12/26/2019

Date Received: 12/26/2019

Final Approval


Josh Wurzer, President
Date: 12/31/2019

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: Serene Whole Flower Hemp CBD Spray

LIMS Sample ID: 191226R006

Batch #:

Source Metric ID(s):

Sample Type: Other

Batch Count:

Sample Count:

Unit Mass: 13.3 Grams per Unit

Serving Mass:

Density: 1.0155 g/mL

Date Collected: 12/26/2019

Date Received: 12/26/2019

Tested for: Brizo Pure

License #:

Address:

Produced by:

License #:

Address:

Moisture Test Results

Moisture Results (%)
NT

Cannabinoid Test Results

12/28/2019

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

	mg/g	%	LOD / LOQ mg/g
Δ9THC	0.039	0.0039	0.0009 / 0.003
Δ8THC	ND	ND	0.0009 / 0.003
THCa	0.012	0.0012	0.0009 / 0.003
THCV	ND	ND	0.0004 / 0.001
THCVa	ND	ND	0.0013 / 0.004
CBD	1.181	0.1181	0.0009 / 0.003
CBDa	0.773	0.0773	0.0009 / 0.003
CBDV	0.009	0.0009	0.0004 / 0.001
CBDVa	0.005	0.0005	0.0003 / 0.001
CBG	0.030	0.0030	0.001 / 0.003
CBGa	0.029	0.0029	0.0008 / 0.002
CBL	ND	ND	0.0021 / 0.006
CBN	ND	ND	0.0009 / 0.003
CBC	0.071	0.0071	0.0011 / 0.003
CBCa	0.148	0.0148	0.0015 / 0.005

Sum of Cannabinoids:	2.297	0.2297	30.550 mg/Unit
Total THC (Δ9THC+0.877*THCa)	0.050	0.005	0.665 mg/Unit
Total CBD (CBD+0.877*CBDa)	1.859	0.1859	24.725 mg/Unit

Δ9THC per Unit
Δ9THC per Serving
Action Limit mg 0.519 mg/Unit

Batch Photo



Terpene Test Results

12/28/2019

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	ND	ND	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	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: ND

Sample Certification

California Code of Regulations Title 16 Effect Date January 16, 2019
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Reference: Sections 26100, 26104 and 26110, Business and Professions Code.



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Josh Wurzer, President
Date: 12/31/2019



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

Sample Name: Serene Whole Flower Hemp CBD Spray

LIMS Sample ID: 191226R006

Batch #:

Source Metric ID(s):

Sample Type: Other

Batch Count:

Sample Count:

Unit Mass: 13.3 Grams per Unit

Serving Mass:

Density: 1.0155 g/mL

Date Collected: 12/26/2019

Date Received: 12/26/2019

Tested for: Brizo Pure

License #:

Address:

Produced by:

License #:

Address:

Pesticide Test Results - Pass

12/28/2019

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	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

12/28/2019

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	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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Sample Name: Serene Whole Flower Hemp CBD Spray
LIMS Sample ID: 191226R006
Batch #:
Source Metric ID(s):

Sample Type: Other
Batch Count:
Sample Count:
Unit Mass: 13.3 Grams per Unit
Serving Mass:
Density: 1.0155 g/mL

Date Collected: 12/26/2019
Date Received: 12/26/2019
Tested for: Brizo Pure

License #:
Address:

Produced by:

License #:
Address:

Residual Solvent Test Results - Pass

12/28/2019

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 154.372	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

12/31/2019

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	24600
Total Yeast and Mold	ND

Foreign Material Test Results

NT

Water Activity Test Results

Water Activity	Results (Aw)	Action Limit Aw
	NT	

Heavy Metal Test Results - Pass

12/29/2019

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

Note

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