

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

Not Detected²

CANNABINOID PROFILE

1.6785% Total CBD¹

1.7045% 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 (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

RESIDUAL SOLVENTS

PASSED

HEAVY METALS

PASSED

MICROBIAL IMPURITIES

PASSED

Freed CBD Balm

Tested for: Freed

Address:

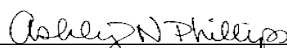
Batch #: FRD006

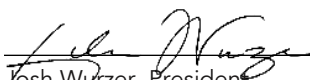
Sample ID: 200109Q007

Date Collected: 01/09/2020

Date Received: 01/09/2020

Final Approval


Ashley Phillips, LQC Verified By
Date: 01/13/2020


Josh Wurzer, President
Date: 01/13/2020

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: Freed CBD Balm
LIMS Sample ID: 200109Q007
Batch #: FRD006
Source METRC UID:

Sample Type: Infused, Topical
Batch Count:
Sample Count:
Unit Mass: 56.699 Grams per Unit
Serving Mass:
Density:

Date Collected: 01/09/2020
Date Received: 01/09/2020
Tested for: Freed

License #:
Address:

Produced by:

License #:
Address:

Moisture Test Results

Moisture **Results (%)**
ND

Cannabinoid Test Results

01/11/2020

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 | 16.777 | 1.6777 | 0.0009 / 0.003 |
| CBDa | 0.009 | 0.0009 | 0.0009 / 0.003 |
| CBDV | 0.259 | 0.0259 | 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: 17.045 1.7045 966.434 mg/Unit
Total THC (Δ9THC+0.877*THCa) ND ND
Total CBD (CBD+0.877*CBDa) 16.785 1.6785 951.693 mg/Unit

Δ9THC per Unit Action Limit mg 1000.0 Pass **ND**
Δ9THC per Serving

Batch Photo



Terpene Test Results

01/12/2020

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

| | mg/g | % | LOD / LOQ mg/g |
|---------------------|-------|--------|----------------|
| ☑ Pinene | 0.336 | 0.0336 | 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 | 0.133 | 0.0133 | 0.027 / 0.082 |
| ☑ Phellandrene | ND | ND | 0.037 / 0.111 |
| 3 Carene | <LOQ | <LOQ | 0.029 / 0.087 |
| ☑ Terpinene | ND | ND | 0.03 / 0.09 |
| Limonene | 0.618 | 0.0618 | 0.013 / 0.039 |
| Eucalyptol | 8.023 | 0.8023 | 0.021 / 0.063 |
| Ocimene | 0.455 | 0.0455 | 0.028 / 0.085 |
| ☑ Terpinene | <LOQ | <LOQ | 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 | 4.055 | 0.4055 | 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 | 0.226 | 0.0226 | 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 | 0.060 | 0.0060 | 0.016 / 0.048 |
| ☑ Cedrene | ND | ND | 0.017 / 0.051 |
| ☑ Caryophyllene | 0.407 | 0.0407 | 0.018 / 0.054 |
| ☑ Humulene | 0.382 | 0.0382 | 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: 14.695 1.4695

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.



Scan to verify at sclabs.com
Sample must be marked as public to be viewable

Ashley Phillips

Ashley Phillips, LQC Verified By
Date: 01/13/2020

Josh Wurzer

Josh Wurzer, President
Date: 01/13/2020



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LIMS Sample ID: 200109Q007
Batch #: FRD006
Source METRC UID:

Sample Type: Infused, Topical
Batch Count:
Sample Count:
Unit Mass: 56.699 Grams per Unit
Serving Mass:
Density:

Date Collected: 01/09/2020
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License #:
Address:

Produced by:

License #:
Address:

Pesticide Test Results - Pass

01/11/2020

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 | 0.024 | 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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Serving Mass:
Density:

Date Collected: 01/09/2020
Date Received: 01/09/2020
Tested for: Freed
License #:
Address:
Produced by:
License #:
Address:

Residual Solvent Test Results - Pass 01/10/2020

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 | | 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 | | 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 01/11/2020

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 | 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 01/12/2020

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 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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