

HEMP LABORATORY TEST CERTIFICATE OF ANALYSIS



Hemp Analysis - Summary

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

TOTAL THC¹

0.6004%²

CANNABINOID PROFILE

15.5638% Total CBD¹

19.796% 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.

MDF-KUSH-B1B-TRIMMED-S02

Address:

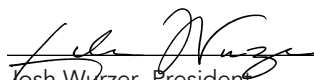
Batch #:

Sample ID: 191014Q003

Date Collected: 10/14/2019

Date Received: 10/14/2019

Final Approval


Josh Wurzer, President
Date: 11/07/2019

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: MDF-KUSH-B1B-TRIMMED-S02

LIMS Sample ID: 191014Q003

Batch #:

Source Metric ID(s):

Sample Type: CBD, Hemp Flower

Batch Count:

Sample Count:

Unit Mass:

Serving Mass:

Density:

Date Collected: 10/14/2019

Date Received: 10/14/2019

Moisture Test Results

Moisture	Results (%)
	NT

Cannabinoid Test Results

10/16/2019

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

	mg/g	%	LOD / LOQ mg/g
Δ9THC	ND	ND	0.052 / 0.158
Δ8THC	ND	ND	0.074 / 0.224
THCa	6.846	0.6846	0.052 / 0.156
THCV	ND	ND	0.045 / 0.137
THCVa	ND	ND	0.088 / 0.267
CBD	1.291	0.1291	0.059 / 0.180
CBDa	175.994	17.5994	0.052 / 0.156
CBDV	ND	ND	0.027 / 0.080
CBDVa	0.439	0.0439	0.030 / 0.090
CBG	0.342	0.0342	0.048 / 0.144
CBGa	5.590	0.5590	0.034 / 0.102
CBL	ND	ND	0.114 / 0.346
CBN	ND	ND	0.052 / 0.157
CBC	ND	ND	0.048 / 0.146
CBCa	7.458	0.7458	0.233 / 0.705

Sum of Cannabinoids:	197.960	19.796
Total THC (Δ9THC+0.877*THCa)	6.004	0.6004
Total CBD (CBD+0.877*CBDa)	155.638	15.5638

Action Limit mg

Δ9THC per Unit
Δ9THC per Serving

Batch Photo



Terpene Test Results

10/16/2019

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

	mg/g	%	LOD / LOQ mg/g
☑ Pinene	0.129	0.0129	0.028 / 0.084
Camphene	ND	ND	0.038 / 0.116
Sabinene	ND	ND	0.024 / 0.073
☑ Pinene	0.158	0.0158	0.016 / 0.048
Myrcene	0.128	0.0128	0.03 / 0.092
☑ Phellandrene	ND	ND	0.048 / 0.144
3 Carene	ND	ND	0.028 / 0.085
☑ Terpinene	ND	ND	0.051 / 0.155
Limonene	1.40	0.140	0.04 / 0.12
Eucalyptol	<LOQ	<LOQ	0.051 / 0.155
Ocimene	ND	ND	0.053 / 0.16
☑ Terpinene	ND	ND	0.038 / 0.114
Sabinene Hydrate	ND	ND	0.046 / 0.138
Fenchone	ND	ND	0.06 / 0.181
Terpinolene	ND	ND	0.042 / 0.128
Linalool	0.42	0.042	0.043 / 0.13
Fenchol	<LOQ	<LOQ	0.051 / 0.153
(-)-Isopulegol	ND	ND	0.026 / 0.08
Camphor	ND	ND	0.08 / 0.242
Isoborneol	ND	ND	0.028 / 0.085
Borneol	ND	ND	0.063 / 0.19
Menthol	ND	ND	0.043 / 0.129
Terpineol	0.130	0.0130	0.029 / 0.087
Nerol	ND	ND	0.042 / 0.128
R-(+)-Pulegone	ND	ND	0.016 / 0.047
Geraniol	ND	ND	0.037 / 0.112
Geranyl Acetate	ND	ND	0.025 / 0.076
☑ Cedrene	0.157	0.0157	0.012 / 0.035
☑ Caryophyllene	5.918	0.5918	0.029 / 0.087
☑ Humulene	1.321	0.1321	0.017 / 0.051
Valencene	0.062	0.0062	0.018 / 0.055
Nerolidol	ND	ND	0.05 / 0.15
Caryophyllene Oxide	0.113	0.0113	0.011 / 0.034
Guaiol	ND	ND	0.035 / 0.106
Cedrol	ND	ND	0.022 / 0.066
☑ Bisabolol	ND	ND	0.057 / 0.172

Total Terpene Concentration: **9.936** **0.9936**

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

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Date: 11/07/2019



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LIMS Sample ID: 191014Q003

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Pesticide Test Results

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	NT		
Acephate	NT		
Acequinocyl	NT		
Acetamiprid	NT		
Azoxystrobin	NT		
Bifenazate	NT		
Bifenthrin	NT		
Boscalid	NT		
Captan	NT		
Carbaryl	NT		
Chlorantraniliprole	NT		
Clofentezine	NT		
Cyfluthrin	NT		
Cypermethrin	NT		
Diazinon	NT		
Dimethomorph	NT		
Etoxazole	NT		
Fenhexamid	NT		
Fenpyroximate	NT		
Fonicamid	NT		
Fludioxonil	NT		
Hexythiazox	NT		
Imidacloprid	NT		
Kresoxim-methyl	NT		
Malathion	NT		
Metalaxyl	NT		
Methomyl	NT		
Myclobutanil	NT		
Naled	NT		
Oxamyl	NT		
Pentachloronitrobenzene	NT		
Permethrin	NT		
Phosmet	NT		
Piperonylbutoxide	NT		
Prallethrin	NT		
Propiconazole	NT		
Pyrethrins	NT		
Pyridaben	NT		
Spinetoram	NT		
Spinosad	NT		
Spiromesifen	NT		
Spirotetramat	NT		
Tebuconazole	NT		
Thiamethoxam	NT		
Trifloxystrobin	NT		

Pesticide Test Results

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	NT		
Carbofuran	NT		
Chlordane	NT		
Chlorfenapyr	NT		
Chlorpyrifos	NT		
Coumaphos	NT		
Daminozide	NT		
DDVP (Dichlorvos)	NT		
Dimethoate	NT		
Ethoprop(hos)	NT		
Etofenprox	NT		
Fenoxycarb	NT		
Fipronil	NT		
Imazalil	NT		
Methiocarb	NT		
Methyl parathion	NT		
Mevinphos	NT		
Pacllobutrazol	NT		
Propoxur	NT		
Spiroxamine	NT		
Thiacloprid	NT		

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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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		

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

Water Activity Test Results

	Results (Aw)	Action Limit Aw
Water Activity	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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