

SAMPLE NAME: Muscle Balm
 Infused, Colorado Infused

CULTIVATOR / MANUFACTURER
Business Name:
License Number:
Address:

DISTRIBUTOR / TESTED FOR
Business Name: Moon Mother Hemp Co.
License Number:
Address:

SAMPLE DETAIL

Batch Number: 72308
Sample ID: 230718S007
Date of Sampling: 07/18/2023
Time of Sampling: 4:51 p.m.
Sampler Name:
Sampler Company:

Date Collected: 07/18/2023
Date Received: 07/18/2023
Batch Size:
Sample Size: 1.0 units
Unit Mass: 28 grams per Unit
Serving Size:



Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: 8.540 mg/unit

Total CBD: 276.108 mg/unit

Sum of Cannabinoids: 308.196 mg/unit

Total Cannabinoids: 308.056 mg/unit

Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step:
 Total THC = $\Delta^9\text{-THC} + (\text{THCa} \times 0.877)$
 Total CBD = $\text{CBD} + (\text{CBDa} \times 0.877)$
 Sum of Cannabinoids = $\Delta^9\text{-THC} + \text{THCa} + \text{CBD} + \text{CBDa} + \text{CBG} + \text{CBGa} + \text{THCV} + \text{THCVa} + \text{CBC} + \text{CBCa} + \text{CBDV} + \text{CBDVa} + \Delta^8\text{-THC} + \text{CBL} + \text{CBN}$
 Total Cannabinoids = $(\Delta^9\text{-THC} + 0.877 \times \text{THCa}) + (\text{CBD} + 0.877 \times \text{CBDa}) + (\text{CBG} + 0.877 \times \text{CBGa}) + (\text{THCV} + 0.877 \times \text{THCVa}) + (\text{CBC} + 0.877 \times \text{CBCa}) + (\text{CBDV} + 0.877 \times \text{CBDVa}) + \Delta^8\text{-THC} + \text{CBL} + \text{CBN}$

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.

Sample Certification: 6 CCR 1010-21 Colorado Wholesale Food, Industrial Hemp, and Shellfish Regulations; where applicable

Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT)


 Approved by: Josh Wurzer
 Job Title: Chief Compliance Officer
 Date: 08/21/2023



Cannabinoi*d* Analysis

Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD).

Method: QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

TOTAL THC: 8.540 mg/unit

Total THC (Δ^9 -THC+0.877*THCa)

TOTAL CBD: 276.108 mg/unit

Total CBD (CBD+0.877*CBDA)

TOTAL CANNABINOIDS: 308.056 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ^8 -THC + CBL + CBN

TOTAL CBG: 7.420 mg/unit

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 13.664 mg/unit

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 2.324 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 07/21/2023

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	±0.3665	9.825	0.9825
CBC	0.003 / 0.010	±0.0157	0.488	0.0488
Δ^9 -THC	0.002 / 0.014	±0.0167	0.305	0.0305
CBG	0.002 / 0.006	±0.0129	0.265	0.0265
CBDV	0.002 / 0.012	±0.0034	0.083	0.0083
CBDA	0.001 / 0.026	±0.0012	0.041	0.0041
Δ^8 -THC	0.01 / 0.02	N/A	ND	ND
THCa	0.001 / 0.005	N/A	ND	ND
THCV	0.002 / 0.012	N/A	ND	ND
THCVa	0.002 / 0.019	N/A	ND	ND
CBDVa	0.001 / 0.018	N/A	ND	ND
CBGa	0.002 / 0.007	N/A	ND	ND
CBL	0.003 / 0.010	N/A	ND	ND
CBN	0.001 / 0.007	N/A	ND	ND
CBCa	0.001 / 0.015	N/A	ND	ND
Total THC		±0.0167	0.305	0.0305
SUM OF CANNABINOIDS			11.007 mg/g	1.1007%

Unit Mass: 28 grams per Unit

Δ^9 -THC per Unit	8.540 mg/unit
Total THC per Unit	8.540 mg/unit
CBD per Unit	275.100 mg/unit
Total CBD per Unit	276.108 mg/unit
Sum of Cannabinoids per Unit	308.196 mg/unit
Total Cannabinoids per Unit	308.056 mg/unit

NOTES


Associated Safety Testing Panel was run under SCL ID 230718S008

SAMPLE NAME: Composite Safety Testing

Infused, Colorado Infused

CULTIVATOR / MANUFACTURER**Business Name:****License Number:****Address:****DISTRIBUTOR / TESTED FOR****Business Name:** Moon Mother Hemp Co.**License Number:****Address:****SAMPLE DETAIL****Batch Number:** n/a**Sample ID:** 230718S008**Date of Sampling:** 07/18/2023**Time of Sampling:** 4:51 p.m.**Sampler Name:****Sampler Company:****Date Collected:** 07/18/2023**Date Received:** 07/18/2023**Batch Size:****Sample Size:** 1.0 units**Unit Mass:****Serving Size:**

Scan QR code to verify authenticity of results.

SAFETY ANALYSIS - SUMMARY**Pesticides:** ND**Mycotoxins:**  **PASS****Residual Solvents:** ND**Heavy Metals:**  **PASS****Microbiology (PCR):**  **PASS****Microbiology (Plating):**  **PASS**

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Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT), too numerous to count >250 cfu/plate (TNTC), colony-forming unit (cfu)


Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 07/28/2023



Pesticide Analysis

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS).

*GC-MS utilized where indicated.

Method: QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS or QSP 1213 - Analysis of Pesticides by GC-MS

PESTICIDE TEST RESULTS - 07/20/2023 ND

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Abamectin	0.032 / 0.097	N/A	ND
Acephate	0.006 / 0.018	N/A	ND
Acequinocyl	0.009 / 0.027	N/A	ND
Acetamiprid	0.016 / 0.049	N/A	ND
Aldicarb	0.030 / 0.090	N/A	ND
Allethrin	0.030 / 0.092	N/A	ND
Atrazine	0.006 / 0.019	N/A	ND
Azadirachtin	0.082 / 0.248	N/A	ND
Azoxystrobin	0.003 / 0.009	N/A	ND
Benzovindiflupyr	0.003 / 0.009	N/A	ND
Bifenazate	0.003 / 0.009	N/A	ND
Bifenthrin	0.021 / 0.064	N/A	ND
Boscalid	0.003 / 0.009	N/A	ND
Buprofezin	0.006 / 0.019	N/A	ND
Carbaryl	0.007 / 0.020	N/A	ND
Carbofuran	0.003 / 0.008	N/A	ND
Chlorantraniliprole	0.006 / 0.018	N/A	ND
Chlorfenapyr*	0.005 / 0.015	N/A	ND
Chlorpyrifos	0.013 / 0.039	N/A	ND
Clofentezine	0.003 / 0.009	N/A	ND
Clothianidin	0.008 / 0.025	N/A	ND
Coumaphos	0.003 / 0.010	N/A	ND
Cyantraniliprole	0.003 / 0.010	N/A	ND
Cyfluthrin	0.052 / 0.159	N/A	ND
Cypermethrin	0.051 / 0.153	N/A	ND
Cyprodinil	0.003 / 0.008	N/A	ND
Daminozide	0.026 / 0.077	N/A	ND
Deltamethrin	0.059 / 0.180	N/A	ND
Diazinon	0.006 / 0.017	N/A	ND
Dichlorvos (DDVP)	0.012 / 0.038	N/A	ND
Dimethoate	0.003 / 0.009	N/A	ND
Dimethomorph	0.016 / 0.050	N/A	ND
Dinotefuran	0.010 / 0.030	N/A	ND
Diuron	0.013 / 0.040	N/A	ND
Dodemorph	0.012 / 0.035	N/A	ND
Endosulfan sulfate	0.016 / 0.048	N/A	ND
Endosulfan-α*	0.004 / 0.014	N/A	ND
Endosulfan-β*	0.006 / 0.019	N/A	ND
Ethoprophos	0.003 / 0.009	N/A	ND
Etofenprox	0.014 / 0.042	N/A	ND
Etoxazole	0.007 / 0.020	N/A	ND

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Pesticide Analysis *Continued*

PESTICIDE TEST RESULTS - 07/20/2023 *continued* ND

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Etridiazole*	0.002 / 0.005	N/A	ND
Fenhexamid	0.003 / 0.008	N/A	ND
Fenoxycarb	0.003 / 0.010	N/A	ND
Fenpyroximate	0.007 / 0.020	N/A	ND
Fensulfothion	0.003 / 0.010	N/A	ND
Fenthion	0.003 / 0.010	N/A	ND
Fenvalerate	0.033 / 0.099	N/A	ND
Fipronil	0.003 / 0.010	N/A	ND
Flonicamid	0.007 / 0.022	N/A	ND
Fludioxonil	0.003 / 0.010	N/A	ND
Fluopyram	0.003 / 0.009	N/A	ND
Hexythiazox	0.003 / 0.010	N/A	ND
Imazalil	0.003 / 0.009	N/A	ND
Imidacloprid	0.003 / 0.010	N/A	ND
Iprodione	0.077 / 0.233	N/A	ND
Kinoprene	0.077 / 0.233	N/A	ND
Kresoxim-methyl	0.006 / 0.019	N/A	ND
λ-Cyhalothrin	0.068 / 0.206	N/A	ND
Malathion	0.003 / 0.009	N/A	ND
Metaxyl	0.003 / 0.010	N/A	ND
Methiocarb	0.003 / 0.008	N/A	ND
Methomyl	0.008 / 0.025	N/A	ND
Methoprene	0.172 / 0.521	N/A	ND
Mevinphos	0.008 / 0.024	N/A	ND
MGK-264	0.015 / 0.047	N/A	ND
Myclobutanil	0.003 / 0.009	N/A	ND
Naled	0.021 / 0.064	N/A	ND
Novaluron	0.002 / 0.005	N/A	ND
Oxamyl	0.017 / 0.051	N/A	ND
Paclobutrazol	0.003 / 0.010	N/A	ND
Parathion-methyl	0.016 / 0.050	N/A	ND
Pentachloronitrobenzene*	0.004 / 0.012	N/A	ND
Permethrin	0.056 / 0.168	N/A	ND
Phenothrin	0.016 / 0.047	N/A	ND
Phosmet	0.007 / 0.020	N/A	ND
Piperonyl Butoxide	0.010 / 0.029	N/A	ND
Pirimicarb	0.003 / 0.009	N/A	ND
Prallethrin	0.015 / 0.046	N/A	ND
Propiconazole	0.027 / 0.080	N/A	ND
Propoxur	0.003 / 0.008	N/A	ND
Pyraclostrobin	0.003 / 0.010	N/A	ND

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Pesticide Analysis *Continued*

PESTICIDE TEST RESULTS - 07/20/2023 *continued* ND

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Pyrethrins	0.016 / 0.049	N/A	ND
Pyridaben	0.005 / 0.017	N/A	ND
Pyriproxyfen	0.003 / 0.009	N/A	ND
Resmethrin	0.013 / 0.039	N/A	ND
Spinetoram	0.003 / 0.010	N/A	ND
Spinosad	0.003 / 0.010	N/A	ND
Spirodiclofen	0.031 / 0.093	N/A	ND
Spiromesifen	0.016 / 0.050	N/A	ND
Spirotetramat	0.003 / 0.010	N/A	ND
Spiroxamine	0.020 / 0.062	N/A	ND
Tebuconazole	0.003 / 0.010	N/A	ND
Tebufenozide	0.003 / 0.008	N/A	ND
Teflubenzuron	0.007 / 0.022	N/A	ND
Tetrachlorvinphos	0.003 / 0.008	N/A	ND
Tetramethrin	0.021 / 0.063	N/A	ND
Thiabendazole	0.006 / 0.020	N/A	ND
Thiacloprid	0.003 / 0.009	N/A	ND
Thiamethoxam	0.003 / 0.010	N/A	ND
Thiophanate-methyl	0.013 / 0.040	N/A	ND
Trifloxystrobin	0.003 / 0.009	N/A	ND



Mycotoxin Analysis

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS).

Method: QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS

MYCOTOXIN TEST RESULTS - 07/20/2023 PASS

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (µg/kg)	RESULT
Aflatoxin B1	1.6 / 5.0	5	N/A	ND	PASS
Aflatoxin B2	1.4 / 4.1		N/A	ND	
Aflatoxin G1	1.6 / 4.9		N/A	ND	
Aflatoxin G2	1.6 / 5.0		N/A	ND	
Total Aflatoxin		20		ND	PASS
Ochratoxin A	1.6 / 5.0	5	N/A	ND	PASS



Residual Solvents Analysis

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

Method: QSP 1204 - Analysis of Residual Solvents by GC-MS

Total Butanes = n-Butane + 2-Methylpropane (Isobutane)

Total Heptanes = 2,2-Dimethylpentane (Neoheptane) +

2,3-Dimethylpentane + 2,4-Dimethylpentane + 3,3-Dimethylpentane +

2,2,3-Trimethylbutane (Triptane) + 2-Methylhexane (Isoheptane) +

3-Methylhexane + 3-Ethylpentane + n-Heptane

Total Xylenes = 1,2-Dimethylbenzene (o-Xylene) +

1,3-Dimethylbenzene (m-Xylene) / 1,4-Dimethylbenzene (p-Xylene)

RESIDUAL SOLVENTS TEST RESULTS - 07/21/2023 ND

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Propane	0.234 / 0.781	N/A	ND
2-Methylpropane (Isobutane)	0.052 / 0.173	N/A	ND
n-Butane	0.019 / 0.063	N/A	ND
Total Butanes			ND
n-Pentane	0.310 / 1.033	N/A	ND
n-Hexane	0.110 / 0.366	N/A	ND
2,2-Dimethylpentane (Neoheptane)	0.493 / 1.642	N/A	ND
2,3-Dimethylpentane	1.009 / 3.365	N/A	ND
2,4-Dimethylpentane	0.737 / 2.458	N/A	ND
3,3-Dimethylpentane	0.198 / 0.660	N/A	ND
2,2,3-Trimethylbutane (Triptane)	0.521 / 1.738	N/A	ND
2-Methylhexane (Isoheptane)	0.610 / 2.034	N/A	ND
3-Methylhexane	0.235 / 0.785	N/A	ND
3-Ethylpentane	0.304 / 1.012	N/A	ND
n-Heptane	13.12 / 43.72	N/A	ND
Total Heptanes			ND
Benzene	0.089 / 0.295	N/A	ND
Toluene	0.115 / 0.382	N/A	ND
1,3-Dimethylbenzene / 1,4-Dimethylbenzene	0.451 / 1.502	N/A	ND
1,2-Dimethylbenzene (o-Xylene)	0.387 / 1.289	N/A	ND
Total Xylenes			ND
Methanol	53.92 / 163.4	N/A	ND
Ethanol	8.984 / 27.23	N/A	ND
2-Propanol (Isopropyl Alcohol)	8.421 / 25.52	N/A	ND
Acetone	10.59 / 32.08	N/A	ND
Ethyl Acetate	1.123 / 3.745	N/A	ND



Heavy Metals Analysis

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS).

Method: QSP 1160 - Analysis of Heavy Metals by ICP-MS

HEAVY METALS TEST RESULTS - 07/21/2023 ✓ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02 / 0.1	1.5	N/A	ND	PASS
Cadmium	0.02 / 0.05	0.5	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	1.5	N/A	ND	PASS



Microbiology Analysis

PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants.

Method: QSP 1221 - Analysis of Microbiological Contaminants

MICROBIOLOGY TEST RESULTS (PCR) - 07/23/2023 ✓ PASS

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing <i>Escherichia coli</i>	Not Detected in 25g	ND	PASS
<i>Salmonella</i> spp.	Not Detected in 25g	ND	PASS

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbiological contaminants.

Method: QSP 6794 - Plating with 3M™ Petrifilm™

MICROBIOLOGY TEST RESULTS (PLATING) - 07/23/2023 ✓ PASS

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)	RESULT
Total Aerobic Bacteria	10000	ND	PASS
Total Yeast and Mold	1000	ND	PASS
Coliforms	100	ND	PASS