

SAMPLE NAME: R&R 90mg Full Spectrum Softgels

Infused, Colorado Infused

CULTIVATOR / MANUFACTURER
Business Name:
License Number:
Address:
DISTRIBUTOR / TESTED FOR
Business Name: R&R CBD

License Number:
Address:

SAMPLE DETAIL
Batch Number: Lot 0930

Sample ID: 230411M022

Date of Sampling: 04/11/2023

Time of Sampling: 11:08 a.m.

Sampler Name:
Sampler Company:
Date Collected: 04/11/2023

Date Received: 04/11/2023

Batch Size:
Sample Size: 1.0 units

Unit Mass: 0.76 grams per Unit

Serving Size: 0.76 grams per Serving


Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY
Total THC: 1.756 mg/unit

Total CBD: 90.432 mg/unit

Sum of Cannabinoids: 98.629 mg/unit

Total Cannabinoids: 98.517 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:

$$\text{Total THC} = \Delta^9\text{-THC} + (\text{THCa} \cdot 0.877)$$

$$\text{Total CBD} = \text{CBD} + (\text{CBDa} \cdot 0.877)$$

$$\text{Sum of Cannabinoids} = \Delta^9\text{-THC} + \text{THCa} + \text{CBD} + \text{CBDa} + \text{CBG} + \text{CBGa} +$$

$$\text{THCV} + \text{THCVa} + \text{CBC} + \text{CBCa} + \text{CBDV} + \text{CBDVa} + \Delta^8\text{-THC} + \text{CBL} + \text{CBN}$$

$$\text{Total Cannabinoids} = (\Delta^9\text{-THC} + 0.877 \cdot \text{THCa}) + (\text{CBD} + 0.877 \cdot \text{CBDa}) +$$

$$(\text{CBG} + 0.877 \cdot \text{CBGa}) + (\text{THCV} + 0.877 \cdot \text{THCVa}) + (\text{CBC} + 0.877 \cdot \text{CBCa}) +$$

$$(\text{CBDV} + 0.877 \cdot \text{CBDVa}) + \Delta^8\text{-THC} + \text{CBL} + \text{CBN}$$
TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.0542%

α-Bisabolol 0.324 mg/g

Guaiol 0.172 mg/g

β-Caryophyllene 0.046 mg/g

SAFETY ANALYSIS - SUMMARY
Pesticides: ND

Mycotoxins:  **PASS**
Residual Solvents: ND

Heavy Metals:  **PASS**
Microbiology (PCR):  **PASS**
Microbiology (Plating):  **PASS**

For quality assurance purposes. Not a Regulatory Hemp Lab Test Report. 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), too numerous to count >250 cfu/plate (TNTC), colony-forming unit (cfu)



Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 04/24/2023



Cannabinoid Analysis

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

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

TOTAL THC: 1.756 mg/unit

Total THC (Δ^9 -THC+0.877*THCa)

TOTAL CBD: 90.432 mg/unit

Total CBD (CBD+0.877*CBDA)

TOTAL CANNABINOIDS: 98.517 mg/unit

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

TOTAL CBG: 1.319 mg/unit

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 2.545 mg/unit

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 0.879 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 04/16/2023

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	±4.4004	117.973	11.7973
CBC	0.003 / 0.010	±0.1068	3.317	0.3317
Δ^9 -THC	0.002 / 0.014	±0.1269	2.311	0.2311
CBN	0.001 / 0.007	±0.0523	1.824	0.1824
CBG	0.002 / 0.006	±0.0841	1.735	0.1735
CBDA	0.001 / 0.026	±0.0329	1.160	0.1160
CBDV	0.002 / 0.012	±0.0472	1.156	0.1156
CBL	0.003 / 0.010	±0.0097	0.263	0.0263
CBCa	0.001 / 0.015	±0.0014	0.036	0.0036
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
Total THC		±0.1269	2.311	0.2311
SUM OF CANNABINOIDS			129.775 mg/g	12.9775%

Unit Mass: 0.76 grams per Unit / Serving Size: 0.76 grams per Serving

Δ^9 -THC per Unit	1.756 mg/unit
Δ^9 -THC per Serving	1.756 mg/serving
Total THC per Unit	1.756 mg/unit
Total THC per Serving	1.756 mg/serving
CBD per Unit	89.659 mg/unit
CBD per Serving	89.659 mg/serving
Total CBD per Unit	90.432 mg/unit
Total CBD per Serving	90.432 mg/serving
Sum of Cannabinoids per Unit	98.629 mg/unit
Sum of Cannabinoids per Serving	98.629 mg/serving
Total Cannabinoids per Unit	98.517 mg/unit
Total Cannabinoids per Serving	98.517 mg/serving



Terpenoid Analysis

Terpene analysis utilizing gas chromatography-flame ionization detection (GC-FID).

Method: QSP 1192 - Analysis of Terpenoids by GC-FID

1 α -Bisabolol

A sesquiterpene alcohol with a fragrance that can be described as floral, peppery, sweet and clean. Found in chamomile, figwort, yarrow, skullcaps, lavender, ironwort, germander...etc.

2 Guaiol

A sesquiterpene alcohol with a fragrance that can be described as floral, piney, herbal and woody. Found in guaiacum, cypress pine, ginseng, melaleuca, goatweed, incense grass...etc.

3 β -Caryophyllene

A sesquiterpene with a fragrance that can be described as spicy, woody, dry, dusty and mildly sweet. It was one of the first organic compounds to fully synthesized in a laboratory and plays a role in the endocannabinoid system as it is a functional CB₂ receptor agonist. Found in black pepper, clove, hops, rosemary, black-jack, perilla, spicebush, Indian pennywort, celery, frankincense, vitex, parsley, marigold, tamarind...etc.

TERPENOID TEST RESULTS - 04/16/2023

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
α -Bisabolol	0.008 / 0.026	± 0.0134	0.324	0.0324
Guaiol	0.009 / 0.030	± 0.0063	0.172	0.0172
β -Caryophyllene	0.004 / 0.012	± 0.0013	0.046	0.0046
α -Humulene	0.009 / 0.029	N/A	<LOQ	<LOQ
Nerolidol	0.006 / 0.019	N/A	<LOQ	<LOQ
α -Pinene	0.005 / 0.017	N/A	ND	ND
Camphene	0.005 / 0.015	N/A	ND	ND
Sabinene	0.004 / 0.014	N/A	ND	ND
β -Pinene	0.004 / 0.014	N/A	ND	ND
Myrcene	0.008 / 0.025	N/A	ND	ND
α -Phellandrene	0.006 / 0.020	N/A	ND	ND
Δ^3 -Carene	0.005 / 0.018	N/A	ND	ND
α -Terpinene	0.005 / 0.017	N/A	ND	ND
p-Cymene	0.005 / 0.016	N/A	ND	ND
Limonene	0.005 / 0.016	N/A	ND	ND
Eucalyptol	0.006 / 0.018	N/A	ND	ND
β -Ocimene	0.006 / 0.020	N/A	ND	ND
γ -Terpinene	0.006 / 0.018	N/A	ND	ND
Sabinene Hydrate	0.006 / 0.022	N/A	ND	ND
Fenchone	0.009 / 0.028	N/A	ND	ND
Terpinolene	0.008 / 0.026	N/A	ND	ND
Linalool	0.009 / 0.032	N/A	ND	ND
Fenchol	0.010 / 0.034	N/A	ND	ND
Isopulegol	0.005 / 0.016	N/A	ND	ND
Camphor	0.006 / 0.019	N/A	ND	ND
Isoborneol	0.004 / 0.012	N/A	ND	ND
Borneol	0.005 / 0.016	N/A	ND	ND
Menthol	0.008 / 0.025	N/A	ND	ND
Terpineol	0.009 / 0.031	N/A	ND	ND
Nerol	0.003 / 0.011	N/A	ND	ND
Citronellol	0.003 / 0.010	N/A	ND	ND
Pulegone	0.003 / 0.011	N/A	ND	ND
Geraniol	0.002 / 0.007	N/A	ND	ND
Geranyl Acetate	0.004 / 0.014	N/A	ND	ND
α -Cedrene	0.005 / 0.016	N/A	ND	ND
trans- β -Farnesene	0.008 / 0.025	N/A	ND	ND
Valencene	0.009 / 0.030	N/A	ND	ND
Caryophyllene Oxide	0.010 / 0.033	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
TOTAL TERPENOIDS			0.542 mg/g	0.0542%



Pesticide Analysis

PESTICIDE TEST RESULTS - 04/13/2023 ND

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

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 - 04/13/2023 *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 - 04/13/2023 *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 TEST RESULTS - 04/13/2023 ✔ PASS

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

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

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 - 04/18/2023 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 - 04/14/2023 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

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

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

MICROBIOLOGY TEST RESULTS (PCR) - 04/17/2023 ✔ 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

MICROBIOLOGY TEST RESULTS (PLATING) - 04/17/2023 ✔ 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

NOTES

CoA Amended Update: Order Details-Serving Mass