

**SAMPLE NAME: R+R Medicinals 25mg Infused Full Spectrum Gummy Rings Lot#2403**

Infused, Hemp Infused

**CULTIVATOR / MANUFACTURER**

**Business Name:**

**License Number:**

**Address:**

**DISTRIBUTOR / TESTED FOR**

**Business Name: R+R Medicinals**

**License Number:**

**Address:**

**SAMPLE DETAIL**

**Batch Number: 2403**

**Sample ID: 210713R013**

**Date Collected: 07/13/2021**

**Date Received: 07/13/2021**

**Batch Size:**

**Sample Size: 1.0 units**

**Unit Mass: 9.5031 grams per Unit**

**Serving Size: 9.5031 grams per Serving**



Scan QR code to verify authenticity of results.

**CANNABINOID ANALYSIS - SUMMARY**

**Total THC: 0.257 mg/unit**

**Total CBD: 27.112 mg/unit**

**Sum of Cannabinoids: 28.110 mg/unit**

**Total Cannabinoids: 28.111 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 =  $\Delta^9\text{THC} + (\text{THCa} \cdot 0.877)$

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

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

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

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

**TERPENOID ANALYSIS - SUMMARY**

39 TESTED, TOP 3 HIGHLIGHTED

**Total Terpenoids: <LOQ**

●  $\alpha$  Bisabolol <LOQ

**SAFETY ANALYSIS - SUMMARY**

**Pesticides: ND**

**Mycotoxins: ND**

**Residual Solvents: DETECTED**

**Heavy Metals: ND**

**Microbiology (PCR): ND**


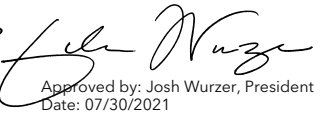
**Microbiology (Plating): ND**

For quality assurance purposes. Not a Pre-Harvest 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:** Action Limits used in this report are a compilation of guidance from state regulatory agencies in all states. Action limits for required tests are either state-specific, or the lower of any conflicting state regulations based upon the panel requested.

**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)


  
 LOQ verified by: Mackenzie Whitman      Approved by: Josh Wurzer, President  
 Date: 07/30/2021                              Date: 07/30/2021



### Cannabinoïd Analysis

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

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

**TOTAL THC: 0.257 mg/unit**

Total THC ( $\Delta 9$ THC+0.877\*THCa)

**TOTAL CBD: 27.112 mg/unit**

Total CBD (CBD+0.877\*CBDA)

**TOTAL CANNABINOIDS: 28.111 mg/unit**

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) +  $\Delta 8$ THC + CBL + CBN

**TOTAL CBG: 0.124 mg/unit**

Total CBG (CBG+0.877\*CBGa)

**TOTAL THCV: ND**

Total THCV (THCV+0.877\*THCVa)

**TOTAL CBC: 0.418 mg/unit**

Total CBC (CBC+0.877\*CBCa)

**TOTAL CBDV: 0.200 mg/unit**

Total CBDV (CBDV+0.877\*CBDVa)

CANNABINOID TEST RESULTS - 07/14/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	±0.1367	2.853	0.2853
CBC	0.003 / 0.010	±0.0018	0.044	0.0044
$\Delta 9$ THC	0.002 / 0.014	±0.0019	0.027	0.0027
CBDV	0.002 / 0.012	±0.0011	0.021	0.0021
CBG	0.002 / 0.006	±0.0008	0.013	0.0013
$\Delta 8$ 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
CBDA	0.001 / 0.026	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
<b>SUM OF CANNABINOIDS</b>			<b>2.958 mg/g</b>	<b>0.2958%</b>

Unit Mass: 9.5031 grams per Unit / Serving Size: 9.5031 grams per Serving

$\Delta 9$ THC per Unit	0.257 mg/unit
$\Delta 9$ THC per Serving	0.257 mg/serving
Total THC per Unit	0.257 mg/unit
Total THC per Serving	0.257 mg/serving
CBD per Unit	27.112 mg/unit
CBD per Serving	27.112 mg/serving
Total CBD per Unit	27.112 mg/unit
Total CBD per Serving	27.112 mg/serving
Sum of Cannabinoids per Unit	28.110 mg/unit
Sum of Cannabinoids per Serving	28.110 mg/serving
Total Cannabinoids per Unit	28.111 mg/unit
Total Cannabinoids per Serving	28.111 mg/serving





## Terpenoid Analysis

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

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

### 1 $\alpha$ 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.

### TERPENOID TEST RESULTS - 07/16/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
$\alpha$ Bisabolol	0.008 / 0.026	N/A	<LOQ	<LOQ
$\alpha$ 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
$\beta$ Pinene	0.004 / 0.014	N/A	ND	ND
Myrcene	0.008 / 0.025	N/A	ND	ND
$\alpha$ Phellandrene	0.006 / 0.020	N/A	ND	ND
3 Carene	0.005 / 0.018	N/A	ND	ND
$\alpha$ 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
Ocimene	0.011 / 0.038	N/A	ND	ND
$\gamma$ 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	0.016 / 0.055	N/A	ND	ND
Nerol	0.003 / 0.011	N/A	ND	ND
Citronellol	0.003 / 0.010	N/A	ND	ND
R-(+)-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
$\alpha$ Cedrene	0.005 / 0.016	N/A	ND	ND
$\beta$ Caryophyllene	0.004 / 0.012	N/A	ND	ND
trans- $\beta$ -Farnesene	0.008 / 0.025	N/A	ND	ND
$\alpha$ Humulene	0.009 / 0.029	N/A	ND	ND
Valencene	0.009 / 0.030	N/A	ND	ND
Nerolidol	0.009 / 0.028	N/A	ND	ND
Caryophyllene Oxide	0.010 / 0.033	N/A	ND	ND
Guaiol	0.009 / 0.030	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
<b>TOTAL TERPENOIDS</b>			<b>&lt;LOQ</b>	<b>&lt;LOQ</b>





## Pesticide Analysis

### PESTICIDE TEST RESULTS - 07/17/2021 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)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Abamectin	0.03 / 0.10	0.3	N/A	ND
Acephate	0.02 / 0.07	5	N/A	ND
Acequinocyl	0.02 / 0.07	4	N/A	ND
Acetamiprid	0.02 / 0.05	5	N/A	ND
Aldicarb	0.03 / 0.08	≥ LOD	N/A	ND
Azoxystrobin	0.02 / 0.07	40	N/A	ND
Bifenazate	0.01 / 0.04	5	N/A	ND
Bifenthrin	0.02 / 0.05	0.5	N/A	ND
Boscalid	0.03 / 0.09	10	N/A	ND
Captan	0.19 / 0.57	5	N/A	ND
Carbaryl	0.02 / 0.06	0.5	N/A	ND
Carbofuran	0.02 / 0.05	≥ LOD	N/A	ND
Chlorantraniliprole	0.04 / 0.12	40	N/A	ND
Chlordane*	0.03 / 0.08	≥ LOD	N/A	ND
Chlorfenapyr*	0.03 / 0.10	≥ LOD	N/A	ND
Chlorpyrifos	0.02 / 0.06	≥ LOD	N/A	ND
Clofentezine	0.03 / 0.09	0.5	N/A	ND
Coumaphos	0.02 / 0.07	≥ LOD	N/A	ND
Cyfluthrin	0.12 / 0.38	1	N/A	ND
Cypermethrin	0.11 / 0.32	1	N/A	ND
Daminozide	0.02 / 0.07	≥ LOD	N/A	ND
DDVP (Dichlorvos)	0.03 / 0.09	≥ LOD	N/A	ND
Diazinon	0.02 / 0.05	0.2	N/A	ND
Dimethoate	0.03 / 0.08	≥ LOD	N/A	ND
Dimethomorph	0.03 / 0.09	20	N/A	ND
Ethoprop(hos)	0.03 / 0.10	≥ LOD	N/A	ND
Etofenprox	0.02 / 0.06	≥ LOD	N/A	ND
Etoxazole	0.02 / 0.06	1.5	N/A	ND
Fenhexamid	0.03 / 0.09	10	N/A	ND
Fenoxycarb	0.03 / 0.08	≥ LOD	N/A	ND
Fenpyroximate	0.02 / 0.06	2	N/A	ND
Fipronil	0.03 / 0.08	≥ LOD	N/A	ND
Flonicamid	0.03 / 0.10	2	N/A	ND
Fludioxonil	0.03 / 0.10	30	N/A	ND
Hexythiazox	0.02 / 0.07	2	N/A	ND
Imazalil	0.02 / 0.06	≥ LOD	N/A	ND
Imidacloprid	0.04 / 0.11	3	N/A	ND
Kresoxim-methyl	0.02 / 0.07	1	N/A	ND
Malathion	0.03 / 0.09	5	N/A	ND
Metalaxyl	0.02 / 0.07	15	N/A	ND
Methiocarb	0.02 / 0.07	≥ LOD	N/A	ND

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**Pesticide Analysis** *Continued*

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 - 07/17/2021** *continued ND*

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Methomyl	0.03 / 0.10	0.1	N/A	ND
Methyl parathion	0.03 / 0.10	≥ LOD	N/A	ND
Mevinphos	0.03 / 0.09	≥ LOD	N/A	ND
Myclobutanil	0.03 / 0.09	9	N/A	ND
Naled	0.02 / 0.07	0.5	N/A	ND
Oxamyl	0.04 / 0.11	0.2	N/A	ND
Paclobutrazol	0.02 / 0.05	≥ LOD	N/A	ND
Pentachloronitrobenzene*	0.03 / 0.09	0.2	N/A	ND
Permethrin	0.04 / 0.12	20	N/A	ND
Phosmet	0.03 / 0.10	0.2	N/A	ND
Piperonylbutoxide	0.02 / 0.07	8	N/A	ND
Prallethrin	0.03 / 0.08	0.4	N/A	ND
Propiconazole	0.02 / 0.07	20	N/A	ND
Propoxur	0.03 / 0.09	≥ LOD	N/A	ND
Pyrethrins	0.04 / 0.12	1	N/A	ND
Pyridaben	0.02 / 0.07	3	N/A	ND
Spinetoram	0.02 / 0.07	3	N/A	ND
Spinosad	0.02 / 0.07	3	N/A	ND
Spiromesifen	0.02 / 0.05	12	N/A	ND
Spirotetramat	0.02 / 0.06	13	N/A	ND
Spiroxamine	0.03 / 0.08	≥ LOD	N/A	ND
Tebuconazole	0.02 / 0.07	2	N/A	ND
Thiacloprid	0.03 / 0.10	≥ LOD	N/A	ND
Thiamethoxam	0.03 / 0.10	4.5	N/A	ND
Trifloxystrobin	0.03 / 0.08	30	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 - 07/16/2021** ND

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (µg/kg)	RESULT (µg/kg)
Aflatoxin B1	2.0 / 6.0	5	N/A	ND
Aflatoxin B2	1.8 / 5.6	20	N/A	ND
Aflatoxin G1	1.0 / 3.1	20	N/A	ND
Aflatoxin G2	1.2 / 3.5	20	N/A	ND
Total Aflatoxin		20		ND
Ochratoxin A	6.3 / 19.2	5	N/A	ND



### Residual Solvents Analysis

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

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

### RESIDUAL SOLVENTS TEST RESULTS - 07/17/2021 DETECTED

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Propane	10 / 20	5000	N/A	ND
Butane	10 / 50	5000	N/A	ND
Pentane	20 / 50	5000	N/A	ND
Hexane	2 / 5	290	N/A	ND
Heptane	20 / 60	5000	N/A	ND
Benzene	0.03 / 0.09	1	N/A	ND
Toluene	7 / 21	890	N/A	ND
Total Xylenes	50 / 160	2170	N/A	ND
Methanol	50 / 200	3000	N/A	ND
Ethanol	20 / 50	5000	N/A	<LOQ
Isopropyl Alcohol	10 / 40	5000	N/A	ND
Acetone	20 / 50	5000	N/A	ND
Ethyl ether	20 / 50	5000	N/A	ND
Ethylene Oxide	0.3 / 0.8	1	N/A	ND
Ethyl acetate	20 / 60	5000	N/A	ND
Chloroform	0.1 / 0.2	1	N/A	ND
Methylene chloride	0.3 / 0.9	1	N/A	ND
Trichloroethylene	0.1 / 0.3	1	N/A	ND
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND
Acetonitrile	2 / 7	410	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 - 07/16/2021 ND

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)
Arsenic	0.02 / 0.1	0.42	N/A	ND
Cadmium	0.02 / 0.05	0.27	N/A	ND
Lead	0.04 / 0.1	0.5	N/A	ND
Mercury	0.002 / 0.01	0.4	N/A	ND





### 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) - 07/20/2021 ND

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)
Shiga toxin-producing <i>Escherichia coli</i>	Not Detected in 1g	ND
<i>Salmonella</i> spp.	Not Detected in 1g	ND
Bile-Tolerant Gram-Negative Bacteria	100	ND
<i>Staphylococcus aureus</i>	Not Detected in 1g	ND

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

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

#### MICROBIOLOGY TEST RESULTS (PLATING) - 07/20/2021 ND

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)
Total Aerobic Bacteria	100	ND
Total Yeast and Mold	10	ND

#### NOTES

COA amended, update to order detail information.

