

SAMPLE NAME: R+R Medicinals 5mg Full Spectrum Pet Chews - Chicken Flavored

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: 6001
Sample ID: 211113S008

Date Collected: 11/13/2021
Date Received: 11/13/2021
Batch Size:
Sample Size: 1.0 units
Unit Mass: 132 grams per Unit
Serving Size: 2.2 grams per Serving



Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: 13.068 mg/unit

Total CBD: 323.136 mg/unit

Sum of Cannabinoids: 368.676 mg/unit

Total Cannabinoids: 368.676 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: 0.0067%

● β Caryophyllene 0.067 mg/g ● α Humulene <LOQ ● α Bisabolol <LOQ

SAFETY ANALYSIS - SUMMARY

Pesticides: ✔ PASS

Mycotoxins: ✔ PASS

Residual Solvents: ✔ PASS

Heavy Metals: ✔ PASS

Microbiology (PCR): ✔ PASS

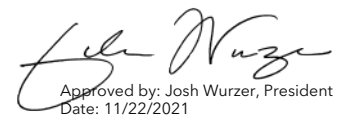
Microbiology (Plating): ✔ PASS

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)


Approved by: Josh Wurzer, President
Date: 11/22/2021



CANNABINOID TEST RESULTS - 11/14/2021

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

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

TOTAL THC: 13.068 mg/unit

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

TOTAL CBD: 323.136 mg/unit

Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 368.676 mg/unit

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

TOTAL CBG: 7.920 mg/unit

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: <LOQ

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 21.252 mg/unit

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 3.300 mg/unit

Total CBDV (CBDV+0.877*CBDVa)

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	±0.1173	2.448	0.2448
CBC	0.003 / 0.010	±0.0067	0.161	0.0161
$\Delta 9$ THC	0.002 / 0.014	±0.0070	0.099	0.0099
CBG	0.002 / 0.006	±0.0037	0.060	0.0060
CBDV	0.002 / 0.012	±0.0013	0.025	0.0025
THCV	0.002 / 0.012	N/A	<LOQ	<LOQ
$\Delta 8$ THC	0.01 / 0.02	N/A	ND	ND
THCa	0.001 / 0.005	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
SUM OF CANNABINOIDS			2.793 mg/g	0.2793%

Unit Mass: 132 grams per Unit / Serving Size: 2.2 grams per Serving

$\Delta 9$ THC per Unit	13.068 mg/unit
$\Delta 9$ THC per Serving	0.218 mg/serving
Total THC per Unit	13.068 mg/unit
Total THC per Serving	0.218 mg/serving
CBD per Unit	323.136 mg/unit
CBD per Serving	5.386 mg/serving
Total CBD per Unit	323.136 mg/unit
Total CBD per Serving	5.386 mg/serving
Sum of Cannabinoids per Unit	368.676 mg/unit
Sum of Cannabinoids per Serving	6.145 mg/serving
Total Cannabinoids per Unit	368.676 mg/unit
Total Cannabinoids per Serving	6.145 mg/serving



Terpenoid Analysis

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

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

1 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.

2 α Humulene

Also known as α -caryophyllene, it is an isomer of the sesquiterpene β -Caryophyllene which frequently occurs in nature with many aromatic plants across the globe. It has a fragrance that can be described as earthy or musky with spicy undertones. Found in hops, forskohlii, skullcaps, basil, nutmeg, cloves, sage, cotton, tamarind, black pepper, guava, Scotch pine...etc.

3 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.

TERPENOID TEST RESULTS - 11/15/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
β Caryophyllene	0.004 / 0.012	± 0.0024	0.067	0.0067
α Humulene	0.009 / 0.029	N/A	<LOQ	<LOQ
α Bisabolol	0.008 / 0.026	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
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
Ocimene	0.011 / 0.038	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	0.016 / 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
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
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
TOTAL TERPENOIDS			0.067 mg/g	0.0067%



 **Pesticide Analysis**

PESTICIDE TEST RESULTS - 11/15/2021  **PASS**

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)	RESULT
Abamectin	0.032 / 0.097	0.07	N/A	ND	PASS
Acephate	0.006 / 0.018	0.05	N/A	ND	PASS
Acequinocyl	0.009 / 0.027	0.03	N/A	ND	PASS
Acetamiprid	0.016 / 0.049	0.05	N/A	ND	PASS
Aldicarb	0.030 / 0.090	0.1	N/A	ND	PASS
Allethrin	0.030 / 0.092	0.1	N/A	ND	PASS
Atrazine	0.006 / 0.019	0.025	N/A	ND	PASS
Azadirachtin	0.082 / 0.248	0.5	N/A	ND	PASS
Azoxystrobin	0.003 / 0.009	0.01	N/A	ND	PASS
Benzovindiflupyr	0.003 / 0.009	0.01	N/A	ND	PASS
Bifenazate	0.003 / 0.009	0.01	N/A	ND	PASS
Bifenthrin	0.021 / 0.064	0.2	N/A	ND	PASS
Boscalid	0.003 / 0.009	0.01	N/A	ND	PASS
Buprofezin	0.006 / 0.019	0.02	N/A	ND	PASS
Captan	0.045 / 0.135	3	N/A	ND	PASS
Carbaryl	0.007 / 0.020	0.025	N/A	ND	PASS
Carbofuran	0.003 / 0.008	0.01	N/A	ND	PASS
Chlorantraniliprole	0.006 / 0.018	0.02	N/A	ND	PASS
Chlordane*	0.005 / 0.107	0.1	N/A	ND	PASS
Chlorfenapyr*	0.005 / 0.015	0.1	N/A	ND	PASS
Chlormequat chloride	0.022 / 0.066	3	N/A	ND	PASS
Chlorpyrifos	0.013 / 0.039	0.04	N/A	ND	PASS
Clofentezine	0.003 / 0.009	0.01	N/A	ND	PASS
Clothianidin	0.008 / 0.025	0.025	N/A	ND	PASS
Coumaphos	0.003 / 0.010	0.01	N/A	ND	PASS
Cyantraniliprole	0.003 / 0.010	0.01	N/A	ND	PASS
Cyfluthrin	0.052 / 0.159	0.1	N/A	ND	PASS
Cypermethrin	0.051 / 0.153	0.3	N/A	ND	PASS
Cyprodinil	0.026 / 0.080	0.01	N/A	ND	PASS
Daminozide	0.026 / 0.077	0.1	N/A	ND	PASS
DDVP (Dichlorvos)	0.012 / 0.038	0.1	N/A	ND	PASS
Deltamethrin	0.059 / 0.180	0.5	N/A	ND	PASS
Diazinon	0.006 / 0.017	0.02	N/A	ND	PASS
Dimethoate	0.003 / 0.009	0.1	N/A	ND	PASS
Dimethomorph	0.016 / 0.050	0.05	N/A	ND	PASS
Dinotefuran	0.010 / 0.030	0.05	N/A	ND	PASS
Diuron	0.013 / 0.040	0.125	N/A	ND	PASS
Dodemorph	0.012 / 0.035	0.05	N/A	ND	PASS
Endosulfan sulfate	0.016 / 0.048	0.05	N/A	ND	PASS
Endosulfan-alpha*	0.004 / 0.014	0.2	N/A	ND	PASS
Endosulfan-beta*	0.006 / 0.019	0.05	N/A	ND	PASS

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 **Pesticide Analysis** *Continued*

PESTICIDE TEST RESULTS - 11/15/2021 *continued*  **PASS**

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)	RESULT
Ethoprop(hos)	0.003 / 0.009	0.01	N/A	ND	PASS
Etofenprox	0.014 / 0.042	0.05	N/A	ND	PASS
Etozazole	0.007 / 0.020	0.01	N/A	ND	PASS
Etridiazole*	0.002 / 0.005	0.03	N/A	ND	PASS
Fenhexamid	0.003 / 0.008	0.125	N/A	ND	PASS
Fenoxycarb	0.003 / 0.010	0.01	N/A	ND	PASS
Fenpyroximate	0.007 / 0.020	0.2	N/A	ND	PASS
Fensulfothion	0.003 / 0.010	0.01	N/A	ND	PASS
Fenthion	0.003 / 0.010	0.01	N/A	ND	PASS
Fenvalerate	0.033 / 0.099	0.1	N/A	ND	PASS
Fipronil	0.003 / 0.010	0.01	N/A	ND	PASS
Fonicamid	0.007 / 0.022	0.025	N/A	ND	PASS
Fludioxonil	0.003 / 0.010	0.01	N/A	ND	PASS
Fluopyram	0.003 / 0.009	0.01	N/A	ND	PASS
Hexythiazox	0.003 / 0.010	0.01	N/A	ND	PASS
Imazalil	0.003 / 0.009	0.01	N/A	ND	PASS
Imidacloprid	0.003 / 0.010	0.01	N/A	ND	PASS
Iprodione	0.077 / 0.233	0.5	N/A	ND	PASS
Kinoprene	0.077 / 0.233	0.5	N/A	ND	PASS
Kresoxim-methyl	0.006 / 0.019	0.02	N/A	ND	PASS
Malathion	0.003 / 0.009	0.02	N/A	ND	PASS
Metalaxyl	0.003 / 0.010	0.02	N/A	ND	PASS
Methiocarb	0.003 / 0.008	0.02	N/A	ND	PASS
Methomyl	0.008 / 0.025	0.05	N/A	ND	PASS
Methoprene	0.172 / 0.521	2	N/A	ND	PASS
Methyl parathion	0.016 / 0.050	0.05	N/A	ND	PASS
Mevinphos	0.008 / 0.024	0.025	N/A	ND	PASS
MGK-264	0.015 / 0.047	0.05	N/A	ND	PASS
Myclobutanil	0.003 / 0.009	0.01	N/A	ND	PASS
Naled	0.021 / 0.064	0.1	N/A	ND	PASS
Novaluron	0.002 / 0.005	0.025	N/A	ND	PASS
Oxamyl	0.017 / 0.051	0.5	N/A	ND	PASS
Paclobutrazol	0.003 / 0.010	0.01	N/A	ND	PASS
Pentachloronitrobenzene*	0.004 / 0.012	0.02	N/A	ND	PASS
Permethrin	0.056 / 0.168	0.04	N/A	ND	PASS
Phenothrin	0.016 / 0.047	0.05	N/A	ND	PASS
Phosmet	0.007 / 0.020	0.02	N/A	ND	PASS
Piperonylbutoxide	0.010 / 0.029	0.2	N/A	ND	PASS
Pirimicarb	0.015 / 0.046	0.01	N/A	ND	PASS
Prallethrin	0.003 / 0.009	0.05	N/A	ND	PASS
Propiconazole	0.027 / 0.080	0.1	N/A	ND	PASS

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 **Pesticide Analysis** *Continued*

PESTICIDE TEST RESULTS - 11/15/2021 *continued*  **PASS**

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)	RESULT
Propoxur	0.003 / 0.008	0.01	N/A	ND	PASS
Pyraclostrobin	0.003 / 0.010	0.01	N/A	ND	PASS
Pyrethrins	0.016 / 0.049	0.05	N/A	ND	PASS
Pyridaben	0.005 / 0.017	0.02	N/A	ND	PASS
Pyriproxyfen	0.003 / 0.009	0.01	N/A	ND	PASS
Resmethrin	0.013 / 0.039	0.05	N/A	ND	PASS
Spinetoram	0.004 / 0.014	0.01	N/A	ND	PASS
Spinosad	0.004 / 0.012	0.01	N/A	ND	PASS
Spirodiclofen	0.031 / 0.093	0.25	N/A	ND	PASS
Spiromesifen	0.016 / 0.050	0.03	N/A	ND	PASS
Spirotetramat	0.003 / 0.010	0.01	N/A	ND	PASS
Spiroxamine	0.020 / 0.062	0.1	N/A	ND	PASS
Tebuconazole	0.003 / 0.010	0.01	N/A	ND	PASS
Tebufozide	0.003 / 0.008	0.01	N/A	ND	PASS
Teflubenzuron	0.007 / 0.022	0.025	N/A	ND	PASS
Tetrachlorvinphos	0.003 / 0.008	0.01	N/A	ND	PASS
Tetramethrin	0.021 / 0.063	0.1	N/A	ND	PASS
Thiabendazole	0.006 / 0.020	0.02	N/A	ND	PASS
Thiacloprid	0.003 / 0.009	0.01	N/A	ND	PASS
Thiamethoxam	0.003 / 0.010	0.01	N/A	ND	PASS
Thiophanate-methyl	0.013 / 0.040	0.05	N/A	ND	PASS
Trifloxystrobin	0.003 / 0.009	0.02	N/A	ND	PASS

 **Mycotoxin Analysis**

MYCOTOXIN TEST RESULTS - 11/15/2021  **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	5	N/A	ND	PASS
Aflatoxin B2	1.4 / 4.1	20	N/A	ND	PASS
Aflatoxin G1	1.6 / 4.9	20	N/A	ND	PASS
Aflatoxin G2	1.6 / 5	20	N/A	ND	PASS
Total Aflatoxin		20		ND	PASS
Ochratoxin A	1.6 / 5	5	N/A	ND	PASS



 **Residual Solvents Analysis**

RESIDUAL SOLVENTS TEST RESULTS - 11/15/2021  **PASS**

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

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

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Propane	0.133 / 0.445	500	N/A	ND	PASS
Butane	0.042 / 0.141	2000	N/A	ND	PASS
Methylpropane	0.04 / 0.133	5000	N/A	ND	PASS
Total Butanes		500		ND	PASS
2-Methylbutane	0.065 / 0.216	5000	N/A	ND	PASS
2,2-Dimethylpropane	0.181 / 0.604		N/A	ND	
Pentane	0.181 / 0.604	1000	N/A	ND	PASS
Total Pentanes		500		ND	PASS
2,2-Dimethylbutane	0.147 / 0.488	290	N/A	ND	PASS
2,3-Dimethylbutane 2-Methylpentane	0.375 / 1.249	290	N/A	ND	PASS
3-Methylpentane	0.075 / 0.251	290	N/A	ND	PASS
Hexane	0.054 / 0.181	0	N/A	ND	PASS
Total Hexanes		290		ND	PASS
Cyclohexane	0.091 / 0.302	500	N/A	ND	PASS
Heptane	0.153 / 0.511	500	N/A	ND	PASS
Benzene	0.066 / 0.221	0	N/A	ND	PASS
Toluene	0.074 / 0.246	0	N/A	ND	PASS
Cumene	0.31 / 1.033	70	N/A	ND	PASS
1,2-Dimethylbenzene	0.239 / 0.797	2170	N/A	ND	PASS
1,3-Dimethylbenzene 1,4-Dimethylbenzene	0.213 / 0.71	2170	N/A	ND	PASS
Ethylbenzene	0.176 / 0.586	2170	N/A	ND	PASS
Total Xylenes	0.320 / 1.067	217	N/A	ND	PASS
Methanol	0.018 / 0.061	500	±3.2338	41.090	PASS
Ethanol	0.129 / 0.429	1000	±0.1374	1.818	PASS
1-Propanol	0.528 / 1.759	5000	N/A	ND	PASS
Isopropyl Alcohol	0.064 / 0.214	500	N/A	ND	PASS
1-Butanol	0.17 / 0.565	5000	N/A	ND	PASS
2-Butanol	0.535 / 1.784	5000	N/A	ND	PASS
1-Pentanol	0.379 / 1.262		N/A	ND	
Acetone	0.083 / 0.277	5000	N/A	ND	PASS
2-Butanone	0.193 / 0.642	5000	N/A	ND	PASS
Tetrahydrofuran	0.22 / 0.735	720	N/A	ND	PASS
Ethyl ether	0.1 / 0.335	5000	N/A	ND	PASS
Ethylene Glycol	31.104 / 103.68	620	N/A	ND	PASS
2-Ethoxyethanol	1.08 / 3.599	160	N/A	ND	PASS
1,2-Dimethoxyethane	1.093 / 3.645	100	N/A	ND	PASS
1,4-Dioxane	0.379 / 1.265	380	N/A	ND	PASS
Ethylene Oxide	0.05 / 0.166	5	N/A	ND	PASS
Ethyl acetate	0.29 / 0.967	1000	N/A	ND	PASS
Isopropyl Acetate	0.346 / 1.153	5000	N/A	ND	PASS

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 **Residual Solvents Analysis**
Continued

RESIDUAL SOLVENTS TEST RESULTS - 11/15/2021 *continued* ✔ PASS

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

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

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Chloroform	0.1 / 0.2	1	N/A	ND	PASS
Methylene chloride	0.114 / 0.381	600	N/A	ND	PASS
Trichloroethylene	0.1 / 0.3	80	N/A	ND	PASS
1,2-Dichloroethane	0.05 / 0.1	5	N/A	ND	PASS
Sulfolane	11.728 / 39.094	160	N/A	ND	PASS
Dimethyl Sulfoxide	1.679 / 5.596	5000	N/A	ND	PASS
Acetonitrile	0.049 / 0.164	410	±0.0168	0.320	PASS
Pyridine	0.118 / 0.394	100	N/A	ND	PASS
N,N-Dimethylacetamide	0.2 / 0.668	1090	N/A	ND	PASS
N,N-Dimethylformamide	0.335 / 1.116	880	N/A	ND	PASS

 **Heavy Metals Analysis**

HEAVY METALS TEST RESULTS - 11/16/2021 ✔ PASS

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

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

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02 / 0.1	0.42	N/A	<LOQ	PASS
Cadmium	0.02 / 0.05	0.27	±0.002	0.06	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	0.4	N/A	ND	PASS

 **Microbiology Analysis**
 PCR AND PLATING

MICROBIOLOGY TEST RESULTS (PCR) - 11/17/2021 ✔ PASS

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

Method: QSP 1221 - Analysis of Microbiological Contaminants

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
<i>Candida albicans</i>	Not Detected in 1g	ND	PASS
<i>Campylobacter</i> spp.	Not Detected in 1g	ND	PASS
<i>Yersinia</i> spp.	Not Detected in 1g	ND	PASS
<i>Listeria monocytogenes</i>	Not Detected in 1g	ND	PASS
<i>Staphylococcus aureus</i>	Not Detected in 1g	ND	PASS



 **Microbiology Analysis** *Continued* MICROBIOLOGY TEST RESULTS (PLATING) - 11/17/2021 ✔ PASS

PCR AND PLATING

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

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

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)	RESULT
Total Enterobacteriaceae	1000	100.0	PASS
<i>Escherichia coli</i>	Not Detected in 10g	ND	PASS
Coliforms	100	ND	PASS

NOTES

CoA amended update: Order Details

