

### **Hemp Quality Assurance Testing**

# **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 01/02/2022** 

SAMPLE NAME: A00000096

Infused, Liquid Edible

**CULTIVATOR / MANUFACTURER** 

**Business Name:** License Number:

Address:

SAMPLE DETAIL

**Batch Number:** 

Sample ID: 211227R005

**DISTRIBUTOR / TESTED FOR** 

Business Name: New York Hemp Oil

License Number:

Address:

Date Collected: 12/27/2021 Date Received: 12/27/2021

Batch Size:

Sample Size: 1.0 units

Unit Mass: 30 milliliters per Unit Serving Size: 1 milliliters per Serving







Scan QR code to verify authenticity of results.

#### **CANNABINOID ANALYSIS - SUMMARY**

Total THC: 25.440 mg/unit

Total CBD: 673.740 mg/unit

Total Cannabinoids: 1371.030 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 =  $\Delta$ 9THC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids =  $\Delta$ 9THC + THCa + CBD + CBDa + CBG + CBGa + Sum of Cannabinoids: 1371.030 mg/unit THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ8THC + CBL + CBN Total Cannabinoids = (Δ9THC+0.877\*THCa) + (CBD+0.877\*CBDa) +

(CBG+0.877\*CBGa) + (THCV+0.877\*THCVa) + (CBC+0.877\*CBCa) + (CBDV+0.877\*CBDVa) + Δ8THC + CBL + CBN

Density: 0.9504 g/mL

**TERPENOID ANALYSIS - SUMMARY** 

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.0561%

 $\beta$  Caryophyllene 0.277 mg/g

 $\bigcirc$   $\alpha$  Bisabolol 0.111 mg/g

 $\alpha$  Humulene 0.105 mg/g

**SAFETY ANALYSIS - SUMMARY** 

∆9THC per Unit: **⊘PASS** 

Pesticides: PASS

Residual Solvents: PASS

Heavy Metals: PASS

Microbiology (PCR): PASS

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: 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.

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)

LQC verified by: Carmen Stackhouse Date: 01/02/2022

Approved by: Josh Wurzer, President Date: 01/02/2022



# **Hemp Quality Assurance Testing**

### **CERTIFICATE OF ANALYSIS**

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

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

TOTAL THC: 25.440 mg/unit

Total THC (Δ9THC+0.877\*THCa)

TOTAL CBD: 673.740 mg/unit

Total CBD (CBD+0.877\*CBDa)

TOTAL CANNABINOIDS: 1371.030 mg/unit

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

TOTAL CBG: 7.320 mg/unit

Total CBG (CBG+0.877\*CBGa)

**TOTAL THCV: ND** 

Total THCV (THCV+0.877\*THCVa)

TOTAL CBC: ND

Total CBC (CBC+0.877\*CBCa)

TOTAL CBDV: 3.630 mg/unit

Total CBDV (CBDV+0.877\*CBDVa)

#### **CANNABINOID TEST RESULTS - 12/28/2021**

	COMPOUND	LOD/LOQ (mg/mL)	MEASUREMENT UNCERTAINTY (mg/mL)	RESULT (mg/mL)	RESULT (%)
Ī	CBD	0.080 / 0.220	±1.0757	22.458	2.3630
Ī	CBN	0.020 / 0.140	±0.8129	22.030	2.3180
	Δ9ΤΗС	0.040 / 0.280	±0.0598	0.848	0.0892
	CBG	0.040 / 0.120	±0.0152	0.244	0.0257
	CBDV	0.040 / 0.240	±0.0063	0.121	0.0127
	Δ8ΤΗС	0.20 / 0.40	N/A	ND	ND
	THCa	0.020 / 0.100	N/A	ND	ND
	THCV	0.040 / 0.240	N/A	ND	ND
t	THCVa	0.040 / 0.380	N/A	ND	ND
١	CBDa	0.020 / 0.520	N/A	ND	ND
	CBDVa	0.020 / 0.360	N/A	ND	ND
	CBGa	0.040 / 0.140	N/A	ND	ND
	CBL	0.060 / 0.200	N/A	ND	ND
	СВС	0.060 / 0.200	N/A	ND	ND
	CBCa	0.020 / 0.300	N/A	ND	ND
•	SUM OF CANNA	BINOIDS		45.701 mg/mL	4.8086%

#### Unit Mass: 30 milliliters per Unit / Serving Size: 1 milliliters per Serving

Δ9THC per Unit	112 per-package limit	25.440 mg/unit	PASS
Δ9THC per Serving		0.848 mg/serving	
Total THC per Unit		25.440 mg/unit	
Total THC per Serving		0.848 mg/serving	
CBD per Unit		673.740 mg/unit	
CBD per Serving		22.458 mg/serving	
Total CBD per Unit		673.740 mg/unit	
Total CBD per Serving		22.458 mg/serving	
Sum of Cannabinoids per Unit		1371.030 mg/unit	
Sum of Cannabinoids per Serving		45.701 mg/serving	
Total Cannabinoids per Unit		1371.030 mg/unit	
Total Cannabinoids per Serving		45.701 mg/serving	

#### **DENSITY TEST RESULT**

0.9504 g/mL

Tested 12/28/2021

**Method:** QSP 7870 - Sample Preparation





## CERTIFICATE OF ANALYSIS

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## **Terpenoid Analysis**

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

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



### **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 CB<sub>2</sub> receptor agonist. Found in black pepper, clove, hops, rosemary, black-jack, perilla, spicebush, Indian pennywort, celery, frankincense, vitex, parsley, marigold, tamarind...etc.



### $\alpha$ 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.



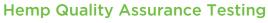
#### $\alpha$ Humulene

Also known as  $\alpha$ -caryophyllene, it is an isomer of the sesquiterpene  $\beta$ -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.



COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
$\beta$ Caryophyllene	0.004 / 0.012	±0.0099	0.277	0.0277
$\alpha$ Bisabolol	0.008 / 0.026	±0.0059	0.111	0.0111
$\alpha$ Humulene	0.009/0.029	±0.0034	0.105	0.0105
Guaiol	0.009 / 0.030	±0.0032	0.068	0.0068
Terpinolene	0.008 / 0.026	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Linalool	0.009 / 0.032	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Fenchol	0.010 / 0.034	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
$trans‐\beta‐Farnesene$	0.008 / 0.025	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Nerolidol	0.009 / 0.028	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Caryophyllene Oxide	0.010 / 0.033	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></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
βPinene	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
γTerpinene	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
(-)-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
Valencene	0.009 / 0.030	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
TOTAL TERPENOIDS			0.561 mg/g	0.0561%







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# **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 - 12/29/2021 **⊘** PASS

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



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### **CERTIFICATE OF ANALYSIS**

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# Pesticide Analysis Continued

sc labs™

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 - 12/29/2021 continued **⊘** PASS

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

### RESIDUAL SOLVENTS TEST RESULTS - 12/29/2021 PASS

100/100

The state of the s	COMPOUND	RESULT
Butane 10 / 50 5000 N/A ND PA	Propane	PASS
	Butane	PASS
Pentane 20 / 50 5000 N/A ND PA	Pentane	PASS
<b>Hexane</b> 2/5 290 <i>N/A</i> <b>ND PA</b>	Hexane	PASS
Heptane 20 / 60 5000 N/A ND PA	Heptane	PASS
Benzene 0.03 / 0.09 1 N/A ND PA	Benzene	PASS
<b>Toluene</b> 7 / 21 890 N/A <b>ND PA</b>	Toluene	PASS
Total Xylenes 50 / 160 2170 N/A ND PA	Total Xylenes	PASS
Methanol 50 / 200 3000 N/A ND PA	Methanol	PASS
<b>Ethanol</b> 20 / 50 5000 N/A <b>ND PA</b>	Ethanol	PASS
Isopropyl Alcohol 10 / 40 5000 N/A ND PA	Isopropyl Alcohol	PASS

ACTION LIMIT

MEASHDEMENT



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# **Hemp Quality Assurance Testing**

### **CERTIFICATE OF ANALYSIS**

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

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

#### RESIDUAL SOLVENTS TEST RESULTS - 12/29/2021 continued PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Acetone	20/50	5000	N/A	ND	PASS
Ethyl ether	20/50	5000	N/A	ND	PASS
Ethylene Oxide	0.3 / 0.8	1	N/A	ND	PASS
Ethyl acetate	20/60	5000	N/A	ND	PASS
Chloroform	0.1/0.2	1	N/A	ND	PASS
Methylene chloride	0.3/0.9	1	N/A	ND	PASS
Trichloroethylene	0.1/0.3	1	N/A	ND	PASS
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Acetonitrile	2/7	410	N/A	ND	PASS



# **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** - 12/28/2021 **OPASS**

	COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (μg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Ī	Arsenic	0.02 / 0.1	1.5	N/A	ND	PASS
	Cadmium	0.02 / 0.05	0.5	N/A	ND	PASS
Ī	Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Ī	Mercury	0.002 / 0.01	3	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) - 01/02/2022 PASS

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

Analysis conducted by 3M<sup>™</sup> Petrifilm<sup>™</sup> and plate counts of microbiological contaminants.

 $\textbf{Method:} \ \, \text{QSP 6794 - Plating with } 3 M^{\text{TM}} \ \, \text{Petrifilm}^{\text{TM}}$ 

#### MICROBIOLOGY TEST RESULTS (PLATING) - 01/02/2022 ND

COMPOUND	RESULT (cfu/g)
Total Aerobic Bacteria	ND
Total Yeast and Mold	ND

