



Hemp Quality Assurance Testing CERTIFICATE OF ANALYSIS

DATE ISSUED 12/19/2020

SAMPLE NAME: A00000022

Infused, Liquid Edible

CULTIVATOR / MANUFACTURER

Business Name:

License Number:

Address:

DISTRIBUTOR

Business Name: New York Hemp Oil

License Number:

Address:

SAMPLE DETAIL

Batch Number:

Sample ID: 201214W008

Date Collected: 12/14/2020

Date Received: 12/14/2020

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: 83.340 mg/unit

Total CBD: 2386.800 mg/unit

Sum of Cannabinoids: 2598.870 mg/unit

Total Cannabinoids: 2598.090 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 = $(\Delta 9\text{THC} + 0.877 \cdot \text{THCa}) + (\text{CBD} + 0.877 \cdot \text{CBDa}) + (\text{CBG} + 0.877 \cdot \text{CBGa}) + (\text{THCV} + 0.877 \cdot \text{THCVa}) + (\text{CBC} + 0.877 \cdot \text{CBCa}) + (\text{CBDV} + 0.877 \cdot \text{CBDVa}) + \Delta 8\text{THC} + \text{CBL} + \text{CBN}$

Moisture: NT

Density: 0.9528 g/mL

Viscosity: NT

SAFETY ANALYSIS - SUMMARY

$\Delta 9\text{THC}$ per Unit: ✔ PASS

Foreign Material: NT

Water Activity: NT

Vitamin E Acetate: NT

Pesticides: ✔ PASS

Mycotoxins: NT

Residual Solvents: ✔ PASS

Heavy Metals: ✔ PASS

Microbial Impurities (PCR): ✔ PASS

Microbial Impurities (Plating): NT

TERPENOID ANALYSIS - SUMMARY

36 TESTED, TOP 3 HIGHLIGHTED

● **β Caryophyllene** 0.94 mg/g

● **α Bisabolol** 0.46 mg/g

● **α Humulene** 0.42 mg/g

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)

Ali Bradford
LQC verified by: Alexandria Bradford
Date: 12/19/2020

Josh Wurzer
Approved by: Josh Wurzer, President
Date: 12/19/2020

CANNABINOID TEST RESULTS - 12/16/2020

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

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

TOTAL THC: 83.340 mg/unit

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

TOTAL CBD: 2386.800 mg/unit

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

TOTAL CANNABINOIDS: 2598.090 mg/unit

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

TOTAL CBG: 32.580 mg/unit

Total CBG ($\text{CBG} + 0.877 \cdot \text{CBGa}$)

TOTAL THCV: ND

Total THCV ($\text{THCV} + 0.877 \cdot \text{THCVa}$)

TOTAL CBC: 76.500 mg/unit

Total CBC ($\text{CBC} + 0.877 \cdot \text{CBCa}$)

TOTAL CBDV: 17.100 mg/unit

Total CBDV ($\text{CBDV} + 0.877 \cdot \text{CBDVa}$)

COMPOUND	LOD/LOQ (mg/mL)	MEASUREMENT UNCERTAINTY (mg/mL)	RESULT (mg/mL)	RESULT (%)
CBD	0.004 / 0.011	± 3.8025	79.385	8.3318
$\Delta 9\text{THC}$	0.002 / 0.005	± 0.1958	2.778	0.2916
CBC	0.003 / 0.010	± 0.1051	2.538	0.2664
CBG	0.002 / 0.005	± 0.0675	1.086	0.1140
CBDV	0.002 / 0.007	± 0.0299	0.570	0.0598
CBDa	0.001 / 0.003	± 0.0073	0.199	0.0209
CBL	0.003 / 0.008	± 0.0019	0.040	0.0042
CBN	0.001 / 0.004	± 0.0007	0.019	0.0020
CBCa	0.001 / 0.004	± 0.0007	0.014	0.0015
$\Delta 8\text{THC}$	0.01 / 0.02	N/A	ND	ND
THCa	0.001 / 0.002	N/A	ND	ND
THCV	0.002 / 0.008	N/A	ND	ND
THCVa	0.002 / 0.005	N/A	ND	ND
CBDVa	0.001 / 0.003	N/A	ND	ND
CBGa	0.002 / 0.006	N/A	ND	ND
SUM OF CANNABINOIDS			86.629 mg/mL	9.092%

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

$\Delta 9\text{THC}$ per Unit	1100 per-package limit	83.340 mg/unit	PASS
$\Delta 9\text{THC}$ per Serving		2.778 mg/serving	
Total THC per Unit		83.340 mg/unit	
Total THC per Serving		2.778 mg/serving	
CBD per Unit		2381.550 mg/unit	
CBD per Serving		79.385 mg/serving	
Total CBD per Unit		2386.800 mg/unit	
Total CBD per Serving		79.560 mg/serving	
Sum of Cannabinoids per Unit		2598.870 mg/unit	
Sum of Cannabinoids per Serving		86.629 mg/serving	
Total Cannabinoids per Unit		2598.090 mg/unit	
Total Cannabinoids per Serving		86.603 mg/serving	

MOISTURE TEST RESULT

Not Tested

DENSITY TEST RESULT

0.9528 g/mL

Tested 12/16/2020

Method: QSP 7870 - Sample Preparation

VISCOSITY TEST RESULT

Not Tested





Terpenoid Analysis

Terpene analysis utilizing gas chromatography-flame ionization detection (GC-FID). Terpenes are the aromatic compounds that endow cannabis with their unique scent and effect. Following are the primary terpenes detected.

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

TERPENOID TEST RESULTS - 12/18/2020

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
β Caryophyllene	0.02 / 0.07	± 0.045	0.94	0.094
α Bisabolol	0.02 / 0.07	± 0.020	0.46	0.046
α Humulene	0.02 / 0.05	± 0.014	0.42	0.042
Guaiol	0.03 / 0.09	± 0.014	0.23	0.023
Linalool	0.03 / 0.08	± 0.004	0.08	0.008
Valencene	0.01 / 0.03	± 0.001	0.07	0.007
Terpinolene	0.03 / 0.09	N/A	<LOQ	<LOQ
Fenchol	0.03 / 0.09	N/A	<LOQ	<LOQ
Terpineol	0.02 / 0.07	N/A	<LOQ	<LOQ
Caryophyllene Oxide	0.04 / 0.11	N/A	<LOQ	<LOQ
α Pinene	0.03 / 0.09	N/A	ND	ND
Camphene	0.04 / 0.11	N/A	ND	ND
Sabinene	0.04 / 0.11	N/A	ND	ND
β Pinene	0.04 / 0.11	N/A	ND	ND
Myrcene	0.04 / 0.11	N/A	ND	ND
α Phellandrene	0.05 / 0.1	N/A	ND	ND
3 Carene	0.04 / 0.1	N/A	ND	ND
α Terpinene	0.04 / 0.1	N/A	ND	ND
Limonene	0.02 / 0.05	N/A	ND	ND
Eucalyptol	0.03 / 0.08	N/A	ND	ND
Ocimene	0.03 / 0.09	N/A	ND	ND
γ Terpinene	0.04 / 0.1	N/A	ND	ND
Sabinene Hydrate	0.02 / 0.07	N/A	ND	ND
Fenchone	0.04 / 0.12	N/A	ND	ND
(-)-Isopulegol	0.02 / 0.05	N/A	ND	ND
Camphor	0.1 / 0.2	N/A	ND	ND
Isoborneol	0.04 / 0.1	N/A	ND	ND
Borneol	0.1 / 0.2	N/A	ND	ND
Menthol	0.03 / 0.09	N/A	ND	ND
Nerol	0.03 / 0.09	N/A	ND	ND
R-(+)-Pulegone	0.03 / 0.09	N/A	ND	ND
Geraniol	0.02 / 0.07	N/A	ND	ND
Geranyl Acetate	0.02 / 0.06	N/A	ND	ND
α Cedrene	0.02 / 0.07	N/A	ND	ND
Nerolidol	0.3 / 0.8	N/A	ND	ND
Cedrol	0.04 / 0.11	N/A	ND	ND
TOTAL TERPENOIDS			2.20 mg/g	0.22%

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 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.

3

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.





Pesticide Analysis

CATEGORY 1 AND 2 PESTICIDES

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

CATEGORY 1 PESTICIDE TEST RESULTS - 12/19/2020 ✓ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Aldicarb	0.03 / 0.09	≥ LOD	N/A	ND	PASS
Carbofuran	0.01 / 0.04	≥ LOD	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
Coumaphos	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Daminozide	0.03 / 0.10	≥ LOD	N/A	ND	PASS
DDVP (Dichlorvos)	0.02 / 0.07	≥ LOD	N/A	ND	PASS
Dimethoate	0.02 / 0.07	≥ LOD	N/A	ND	PASS
Ethoprop(hos)	0.03 / 0.08	≥ LOD	N/A	ND	PASS
Etofenprox	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Fenoxycarb	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Fipronil	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Imazalil	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Methiocarb	0.02 / 0.06	≥ LOD	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
Paclobutrazol	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Propoxur	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Spiroxamine	0.02 / 0.05	≥ LOD	N/A	ND	PASS
Thiacloprid	0.03 / 0.07	≥ LOD	N/A	ND	PASS

CATEGORY 2 PESTICIDE TEST RESULTS - 12/19/2020 ✓ PASS

Abamectin	0.03 / 0.10	0.3	N/A	ND	PASS
Acephate	0.01 / 0.04	5	N/A	ND	PASS
Acequinocyl	0.02 / 0.05	4	N/A	ND	PASS
Acetamiprid	0.02 / 0.05	5	N/A	ND	PASS
Azoxystrobin	0.01 / 0.04	40	N/A	ND	PASS
Bifenazate	0.01 / 0.02	5	N/A	ND	PASS
Bifenthrin	0.01 / 0.02	0.5	N/A	ND	PASS
Boscalid	0.02 / 0.06	10	N/A	ND	PASS
Captan	0.2 / 0.5	5	N/A	ND	PASS
Carbaryl	0.01 / 0.02	0.5	N/A	ND	PASS
Chlorantraniliprole	0.01 / 0.03	40	N/A	ND	PASS

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Pesticide Analysis *Continued*
CATEGORY 1 AND 2 PESTICIDES

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

CATEGORY 2 PESTICIDE TEST RESULTS - 12/19/2020 *continued* **PASS**

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Clofentezine	0.02 / 0.06	0.5	N/A	ND	PASS
Cyfluthrin	0.1 / 0.4	1	N/A	ND	PASS
Cypermethrin	0.1 / 0.3	1	N/A	ND	PASS
Diazinon	0.01 / 0.04	0.2	N/A	ND	PASS
Dimethomorph	0.01 / 0.03	20	N/A	ND	PASS
Etoxazole	0.010 / 0.028	1.5	N/A	ND	PASS
Fenhexamid	0.02 / 0.1	10	N/A	ND	PASS
Fenpyroximate	0.03 / 0.08	2	N/A	ND	PASS
Flonicamid	0.01 / 0.04	2	N/A	ND	PASS
Fludioxonil	0.03 / 0.08	30	N/A	ND	PASS
Hexythiazox	0.01 / 0.04	2	N/A	ND	PASS
Imidacloprid	0.01 / 0.04	3	N/A	ND	PASS
Kresoxim-methyl	0.02 / 0.07	1	N/A	ND	PASS
Malathion	0.02 / 0.05	5	N/A	ND	PASS
Metalaxyl	0.02 / 0.06	15	N/A	ND	PASS
Methomyl	0.03 / 0.1	0.1	N/A	ND	PASS
Myclobutanil	0.03 / 0.1	9	N/A	ND	PASS
Naled	0.03 / 0.1	0.5	N/A	ND	PASS
Oxamyl	0.02 / 0.06	0.2	N/A	ND	PASS
Pentachloronitrobenzene*	0.03 / 0.09	0.2	N/A	ND	PASS
Permethrin	0.03 / 0.09	20	N/A	ND	PASS
Phosmet	0.03 / 0.10	0.2	N/A	ND	PASS
Piperonylbutoxide	0.003 / 0.009	8	N/A	ND	PASS
Prallethrin	0.03 / 0.08	0.4	N/A	ND	PASS
Propiconazole	0.01 / 0.03	20	N/A	ND	PASS
Pyrethrins	0.03 / 0.08	1	N/A	ND	PASS
Pyridaben	0.006 / 0.019	3	N/A	ND	PASS
Spinetoram	0.02 / 0.07	3	N/A	ND	PASS
Spinosad	0.02 / 0.06	3	N/A	ND	PASS
Spiromesifen	0.02 / 0.05	12	N/A	ND	PASS
Spirotetramat	0.01 / 0.02	13	N/A	ND	PASS
Tebuconazole	0.02 / 0.07	2	N/A	ND	PASS
Thiamethoxam	0.03 / 0.08	4.5	N/A	ND	PASS
Trifloxystrobin	0.01 / 0.03	30	N/A	ND	PASS





Residual Solvents Analysis

CATEGORY 1 AND 2 RESIDUAL SOLVENTS

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

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

CATEGORY 1 RESIDUAL SOLVENTS TEST RESULTS - 12/17/2020 ✔ PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Chloroform	0.1 / 0.2	1	N/A	ND	PASS
Ethylene Oxide	0.1 / 0.4	1	N/A	<LOQ	PASS
Methylene chloride	0.3 / 0.9	1	N/A	ND	PASS
Trichloroethylene	0.1 / 0.3	1	N/A	ND	PASS

CATEGORY 2 RESIDUAL SOLVENTS TEST RESULTS - 12/17/2020 ✔ PASS

Acetone	20 / 50	5000	N/A	ND	PASS
Acetonitrile	2 / 7	410	N/A	ND	PASS
Butane	10 / 50	5000	N/A	ND	PASS
Ethanol	20 / 50	5000	N/A	ND	PASS
Ethyl acetate	20 / 60	5000	N/A	ND	PASS
Ethyl ether	20 / 50	5000	N/A	ND	PASS
Heptane	20 / 60	5000	N/A	ND	PASS
Hexane	2 / 5	290	N/A	ND	PASS
Isopropyl Alcohol	10 / 40	5000	N/A	ND	PASS
Methanol	50 / 200	3000	N/A	ND	PASS
Pentane	20 / 50	5000	N/A	ND	PASS
Propane	10 / 20	5000	N/A	ND	PASS
Toluene	7 / 21	890	N/A	ND	PASS
Total Xylenes	50 / 160	2170	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 - 12/16/2020 ✔ PASS

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





Microbial Impurities Analysis

PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbial impurities.

Method: QSP 1221 - Analysis of Microbial Impurities

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbial impurities.

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

MICROBIAL IMPURITIES TEST RESULTS (PCR) - 12/17/2020 ✓ PASS

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing <i>Escherichia coli</i>	Detect	ND	PASS
<i>Salmonella</i> spp.	Detect	ND	PASS
<i>Aspergillus fumigatus</i>	Detect	ND	PASS
<i>Aspergillus flavus</i>	Detect	ND	PASS
<i>Aspergillus niger</i>	Detect	ND	PASS
<i>Aspergillus terreus</i>	Detect	ND	PASS

MICROBIAL IMPURITIES TEST RESULTS (PLATING)

COMPOUND	RESULT (cfu/g)
Aerobic Plate Count	NT
Total Yeast and Mold	NT

