

Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DATE ISSUED 05/10/2023

SAMPLE NAME: A00000188

Infused, Hemp

CULTIVATOR / MANUFACTURER

Business Name: License Number:

Address:

SAMPLE DETAIL

Batch Number:

Sample ID: 230505R007

DISTRIBUTOR / TESTED FOR

Business Name: New York Hemp Oil

License Number:

Address:

Date Collected: 05/05/2023

Date Received: 05/05/2023

Batch Size:

Sample Size: 1.0 units

Unit Mass:

Serving Size: 1 milliliters per Serving





Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: 0.707 mg/mL

Total CBD: 19.392 mg/mL

Sum of Cannabinoids: 41.452 mg/mL

Total Cannabinoids: 41.452 mg/mL

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 = Δ^9 -THC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids = Δ^9 -THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ^8 -THC + CBL + CBN Total Cannabinoids = (Δ^9 -THC+0.877*THCa) + (CBD+0.877*CBDa) + (CBG+0.877*CBGa) + (THCV+0.877*THCVa) + (CBC+0.877*CBCa) +

(CBDV+0.877*CBDVa) + Δ ⁸-THC + CBL + CBN

Density: 0.9506 g/mL

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.0481%

B-Caryophyllene 0.155 mg/g

α-Bisabolol 0.120 mg/g

Guaiol 0.085 mg/g

SAFETY ANALYSIS - SUMMARY

Pesticides: ND Residual Solvents: ND Heavy Metals: ND

Microbiology (PCR): ND Microbiology (Plating): ND

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: California Code of Regulations Title 4 Division 19. Department of Cannabis Control 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)

LOC verified by: Alexandria Bradford Job Title: Laboratory Alalyst II Date: 05/10/2023

Approved by: Josh Wurzer

Job Title: Chief Compliance Officer

Date: 05/10/2023



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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: 0.707 mg/mL Total THC (Δ^9 -THC+0.877*THCa)

TOTAL CBD: 19.392 mg/mL
Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 41.452 mg/mL

$$\label{eq:total_constraint} \begin{split} & Total \ Cannabinoids \ (Total \ THC) + (Total \ CBD) + (Total \ CBC) + (Total \ CBC) + (Total \ CBDV) + \Delta^8 - THC + CBL + CBN \end{split}$$

TOTAL CBG: 0.242 mg/mL

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 0.735 mg/mL
Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 0.142 mg/mL
Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 05/08/2023

COMPOUND	LOD/LOQ (mg/mL)	MEASUREMENT UNCERTAINTY (mg/mL)	RESULT (mg/mL)	RESULT (%)
CBN	0.001 / 0.007	±0.5795	20.192	2.1241
CBD	0.004 / 0.011	±0.7233	19.392	2.0400
СВС	0.003 / 0.010	±0.0237	0.735	0.0773
Δ ⁹ -THC	0.002 / 0.014	±0.0388	0.707	0.0744
CBG	0.002 / 0.006	±0.0117	0.242	0.0255
CBDV	0.002/0.012	±0.0058	0.142	0.0149
CBL	0.003 / 0.010	±0.0015	0.042	0.0044
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
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
CBCa	0.001 / 0.015	N/A	ND	ND
SUM OF CANNA	BINOIDS		41.452 mg/mL	4.3606%

Serving Size: 1 milliliters per Serving

Δ^9 -THC per Serving	0.707 mg/serving
Total THC per Serving	0.707 mg/serving
CBD per Serving	19.392 mg/serving
Total CBD per Serving	19.392 mg/serving
Sum of Cannabinoids per Serving	41.452 mg/serving
Total Cannabinoids per Serving	41.452 mg/serving

DENSITY TEST RESULT

0.9506 g/mL

Tested 05/08/2023

Method: QSP 7870 - Sample



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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 CB₂ receptor agonist. Found in black pepper, clove, hops, rosemary, black-jack, perilla, spicebush, Indian pennywort, celery, frankincense, vitex, parsley, marigold, tamarind...etc.



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.



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.

TERPENOID TEST RESULTS - 05/10/2023

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
β-Caryophyllene	0.004 / 0.012	±0.0043	0.155	0.0155
α-Bisabolol	0.008 / 0.026	±0.0050	0.120	0.0120
Guaiol	0.009 / 0.030	±0.0031	0.085	0.0085
α-Humulene	0.009 / 0.029	±0.0017	0.069	0.0069
Caryophyllene Oxide	0.010/0.033	±0.0019	0.052	0.0052
trans-β-Farnesene	0.008 / 0.025	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Valencene	0.009 / 0.030	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Nerolidol	0.006/0.019	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></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. <mark>026</mark>	N/A	ND	ND
Linalool	0.009/0.032	N/A	ND	ND
Fenchol	0.01 <mark>0/0.034</mark>	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
Cedrol	0.008 / 0.027	N/A	ND	ND
TOTAL TERPENOIDS			0.481 mg/g	0.0481%



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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 - 05/08/2023 ND

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (μg/g)
Abamectin	0.03 / 0.10	N/A	ND
Azoxystrobin	0.02 / 0.07	N/A	ND
Bifenazate	0.01 / 0.04	N/A	ND
Bifenthrin	0.02 / 0.05	N/A	ND
Boscalid	0.03/0.09	N/A	ND
Chlorpyrifos	0.02 / 0.06	N/A	ND
Cypermethrin	0.11/0.32	N/A	ND
Etoxazole	0.02 / 0.06	N/A	ND
Hexythiazox	0.02 / 0.07	N/A	ND
Imidacloprid	0.04 / 0.11	N/A	ND
Malathion	0.03 / 0.09	N/A	ND
Myclobutanil	0.03 / 0.09	N/A	ND
Permethrin	0.04 / 0.12	N/A	ND
Piperonyl Butoxide	0.02 / 0.07	N/A	ND
Propiconazole	0.02 / 0.07	N/A	ND
Spiromesifen	0.02 / 0.05	N/A	ND
Tebuconazole	0.02 / 0.07	N/A	ND
Trifloxystrobin	0.03 / 0.08	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 - 05/08/2023 ND

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (μg/g)
Propane	10/20	N/A	ND
n-Butane	10/50	N/A	ND
n-Pentane	20 / 50	N/A	ND
n-Hexane	2/5	N/A	ND
n-Heptane	20/60	N/A	ND
Benzene	0.03 / 0.09	N/A	ND
Toluene	7/21	N/A	ND
Total Xylenes	50 / 160	N/A	ND
Methanol	50 / 200	N/A	ND
Ethanol	20 / 50	N/A	ND
2-Propanol (Isopropyl Alcohol)	10 / 40	N/A	ND
Acetone	20/50	N/A	ND
Ethyl Ether	20/50	N/A	ND
Ethylene Oxide	0.3 / 0.8	N/A	ND
Ethyl Acetate	20/60	N/A	ND
Chloroform	0.1/0.2	N/A	ND
Dichloromethane (Methylene Chloride)	0.3 / 0.9	N/A	ND

Continued on next page









RESIDUAL SOLVENTS TEST RESULTS - 05/08/2023 continued ND

COMPOUND	LOD/LOQ (μg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (μg/g)
Trichloroethylene	0.1 / 0.3	N/A	ND
1,2-Dichloroethane	0.05 / 0.1	N/A	ND
Acetonitrile	2/7	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 - 05/08/2023 ND

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)
Arsenic	0.02 / 0.1	N/A	ND
Cadmium	0.02 / 0.05	N/A	ND
Lead	0.04 / 0.1	N/A	ND
Mercury	0.002 / 0.01	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) - 05/09/2023 ND

COMPOUND	RESULT (cfu/g)
Shiga toxin-producing Escherichia coli	ND
Salmonella spp.	ND
Bile-Tolerant Gram-Negative Bacteria	ND
Staphylococcus aureus	ND

Analysis conducted by $3M^{\mathsf{TM}}$ Petrifilm and plate counts of microbiological contaminants.

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

MICROBIOLOGY TEST RESULTS (PLATING) - 05/09/2023 ND

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