

Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DATE ISSUED 08/14/2024

SAMPLE NAME: Northern Lights Lemonade

Infused, Hemp

CULTIVATOR / MANUFACTURER

Business Name: License Number:

Address:

SAMPLE DETAIL

Batch Number: 240423.03 **Sample ID:** 240810L002

DISTRIBUTOR / TESTED FOR

Business Name: Elm Woods Hemp

Farm

License Number:

Address:

Date Collected: 08/10/2024 Date Received: 08/10/2024

Batch Size:

Sample Size: 1.0 units

Unit Mass: 355 milliliters per Unit

Serving Size:







Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: 9.4785 mg/unit

Total CBD: 0.4615 mg/unit

Sum of Cannabinoids: 9.9400 mg/unit

Total Cannabinoids: 9.9400 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 = Δ^{0} -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 = $(\Delta^9$ -THC+0.877*THCa) + (CBD+0.877*CBDa) + (CBG+0.877*CBGa) + (THCV+0.877*THCVa) + (CBC+0.877*CBCa) +

 $(CBDV+0.877*CBGa) + (THCV+0.877*THCVa) + (CBDV+0.877*CBDVa) + \Delta^8-THC + CBL + CBN$

Density: 1.0474 g/mL

SAFETY ANALYSIS - SUMMARY

Pesticides: ND
Heavy Metals: ND

Mycotoxins: ND

Microbiology (PCR): ND

Residual Solvents: DETECTED

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.

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: Maria Garcia Job Title: Senior Laboratory Analyst Date: 08/14/2024 Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 08/14/2024



Hemp Quality Assurance Testing CERTIFICATE OF ANALYSIS

NORTHERN LIGHTS LEMONADE | DATE ISSUED 08/14/2024



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: 9.4785 mg/unit

Total THC (Δ⁹-THC+0.877*THCa)

TOTAL CBD: 0.4615 mg/unit

Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 9.9400 mg/unit

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ^8 -THC + CBL + CBN

TOTAL CBG: ND

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: ND

Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 08/10/2024

COMPOUND	LOD/LOQ (mg/mL)	MEASUREMENT UNCERTAINTY (mg/mL)	RESULT (mg/mL)	RESULT (%)
Δ^9 -THC	0.0001 / 0.0005	±0.00147	0.0267	0.00255
CBD	0.0001 / 0.0004	±0.00005	0.0013	0.00012
Δ^8 -THC	0.0003 / 0.0008	N/A	ND	ND
THCa	0.0001 / 0.0002	N/A	ND	ND
THCV	0.0001 / 0.0005	N/A	ND	ND
THCVa	0.0001 / 0.0007	N/A	ND	ND
CBDa	0.0001/0.0010	N/A	ND	ND
CBDV	0.0001 / 0.0005	N/A	ND	ND
CBDVa	0.0001 / 0.0007	N/A	ND	ND
CBG	0.0001 / 0.0002	N/A	ND	ND
CBGa	0.0001 / 0.0003	N/A	ND	ND
CBL	0.0001 / 0.0004	N/A	ND	ND
CBN	0.0001 / 0.0003	N/A	ND	ND
СВС	0.0001/0.0004	N/A	ND	ND
CBCa	0.0001 / 0.0006	N/A	ND	ND
SUM OF CANNAI	BINOIDS		0.0280 mg/mL	0.00267%

Unit Mass: 355 milliliters per Unit

Δ^9 -THC per Unit	9.4785 mg/unit
Total THC per Unit	9.4785 mg/unit
CBD per Unit	0.4615 mg/unit
Total CBD per Unit	0.4615 mg/unit
Sum of Cannabinoids per Unit	9.9400 mg/unit
Total Cannabinoids per Unit	9.9400 mg/unit

DENSITY TEST RESULT

1.0474 g/mL

Tested 08/10/2024

Method: QSP 7870 - Sample Preparation

Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS



NORTHERN LIGHTS LEMONADE | DATE ISSUED 08/14/2024



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 - 08/14/2024 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



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 - 08/14/2024 ND

COMPOUND	LOD/LOQ (µg/kg)	MEASUREMENT UNCERTAINTY (μg/kg)	RESULT (μg/kg)
Aflatoxin B1	2.0/6.0	N/A	ND
Aflatoxin B2	1.8 / 5.6	N/A	ND
Aflatoxin G1	1.0 / 3.1	N/A	ND
Aflatoxin G2	1.2 / 3.5	N/A	ND
Total Aflatoxin			ND
Ochratoxin A	6.3 / 19.2	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 - 08/12/2024 DETECTED

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

Continued on next page

CERTIFICATE OF ANALYSIS

NORTHERN LIGHTS LEMONADE | DATE ISSUED 08/14/2024



Residual Solvents Analysis

RESIDUAL SOLVENTS TEST RESULTS - 08/12/2024 continued **DETECTED**

COMPOUND	LOD/LOQ (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (μg/g)
Total Xylenes	50 / 160	N/A	ND
Methanol	50 / 200	N/A	ND
Ethanol	20/50	N/A	<loq< th=""></loq<>
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
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



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

HEAVY METALS TEST RESULTS - 08/11/2024 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 TEST RESULTS (PCR) - 08/13/2024 ND

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



NORTHERN LIGHTS LEMONADE | DATE ISSUED 08/14/2024





Microbiology Analysis Continued MICROBIOLOGY TEST RESULTS (PLATING) - 08/13/2024 ND

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

Method: QSP 6794 - Plating with $3M^{TM}$ Petrifilm TM

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