

#### CERTIFICATE OF ANALYSIS

**DATE ISSUED 04/12/2025** 

#### **SAMPLE DETAILS**

**SAMPLE NAME: Blue Raspberry** 

Infused, Solid Edible

**CULTIVATOR / MANUFACTURER** 

**Business Name:** License Number:

Address:

SAMPLE DETAIL

**Batch Number:** 

Sample ID: 250403M013

**DISTRIBUTOR / TESTED FOR** 

Business Name: North Star Hemp

License Number:

Address:

Date Collected: 04/03/2025 Date Received: 04/03/2025

Batch Size:

Sample Size: 10.0 units Unit Mass: 3.5 grams per Unit Serving Size: 3.5 grams per Serving





Scan QR code to verify authenticity of results.

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

Total THC: 10.245 mg/unit

Total CBD: 11.141 mg/unit

Sum of Cannabinoids: 23.356 mg/unit

Total Cannabinoids: 23.356 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 =  $\Delta^9$ -THC + (THCa (0.877)) Total CBD = CBD + (CBDa (0.877))Sum of Cannabinoids =  $\Delta^9$ -THC + THCa + CBD + CBDa + CBG + CBGa +

THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ8-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) +

 $(CBDV+0.877*CBDVa) + \Delta^{8}-THC + CBL + CBN$ 

#### **SAFETY ANALYSIS - SUMMARY**

Pesticides: PASS

Microbiology (PCR): PASS

Mycotoxins: PASS

Microbiology (Plating): ND

Residual Solvents: PASS

Foreign Material: PASS

Heavy Metals: PASS

Water Activity: PASS

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),  $\mu g/g = ppm$ ,  $\mu g/kg = ppb$ , too numerous to count >250 cfu/plate (TNTC), colony-forming unit (cfu)

LQC verified by: Josh Antunovich Job Title: Laboratory Director Date: 04/12/2025

Approved by: Josh Wurzer Title: Chief Compliance Officer Date: 04/12/2025

Amendment to Certificate of Analysis 250403M013-001



#### **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: 10.245 mg/unit Total THC ( $\Delta^9$ -THC+0.877\*THCa)

TOTAL CBD: 11.141 mg/unit

Total CBD (CBD+0.877\*CBDa)

TOTAL CANNABINOIDS: 23.356 mg/unit

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

TOTAL CBG: 1.117 mg/unit

Total CBG (CBG+0.877\*CBGa)

TOTAL THCV: 0.077 mg/unit

Total THCV (THCV+0.877\*THCVa)

TOTAL CBC: 0.483 mg/unit

Total CBC (CBC+0.877\*CBCa)

TOTAL CBDV: 0.095 mg/unit

Total CBDV (CBDV+0.877\*CBDVa)

#### **CANNABINOID TEST RESULTS - 04/04/2025**

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBD	0.004 / 0.011	±0.1187	3.183	0.3183
Δ <sup>9</sup> -THC	0.040 / 0.280	±0.1607	2.927	0.2927
CBG	0.002 / 0.006	±0.0155	0.319	0.0319
СВС	0.003 / 0.010	±0.0044	0.138	0.0138
CBN	0.001 / 0.007	±0.0016	0.057	0.0057
CBDV	0.002 / 0.012	±0.0011	0.027	0.0027
THCV	0.002 / 0.012	±0.0011	0.022	0.0022
$\Delta^8$ -THC	0.01 / 0.02	N/A	ND	ND
THCa	0.020 / 0.100	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
CBCa	0.001 / 0.015	N/A	ND	ND
SUM OF CANNA	BINOIDS		6.673 mg/g	0.6673%

#### Unit Mass: 3.5 grams per Unit / Serving Size: 3.5 grams per Serving

$\Delta^9$ -THC per Unit	10.245 mg/unit
$\Delta^9$ -THC per Serving	10.245 mg/serving
Total THC per Unit	10.245 mg/unit
Total THC per Serving	10.245 mg/serving
CBD per Unit	11.141 mg/unit
CBD per Serving	11.141 mg/serving
Total CBD per Unit	11.141 mg/unit
Total CBD per Serving	11.141 mg/serving
Sum of Cannabinoids per Unit	23.356 mg/unit
Sum of Cannabinoids per Serving	23.356 mg/serving
Total Cannabinoids per Unit	23.356 mg/unit
Total Cannabinoids per Serving	23.356 mg/serving



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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 - 04/09/2025 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
Diazinon	0.02 / 0.05	0.2	N/A	ND	PASS
Dichlorvos (DDVP)	0.03 / 0.09	≥LOD	N/A	ND	PASS
Dimethoate	0.03/0.08	≥LOD	N/A	ND	PASS
Dimethomorph	0.03/0.09	20	N/A	ND	PASS
Ethoprophos	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**



DATE ISSUED 04/12/2025



#### Pesticide Analysis Continued

#### PESTICIDE TEST RESULTS - 04/09/2025 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
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
Parathion-methyl	0.03 / 0.10	≥LOD	N/A	ND	PASS
Pentachloronitro- benzene (Quintozene)*	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
Piperonyl Butoxide	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



### **Mycotoxin Analysis**

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS).

**Method:** QSP 1212 - Analysis of Pesticides and Mycotoxins by

#### MYCOTOXIN TEST RESULTS - 04/09/2025 PASS

COMPOUND	LOD/LOQ (µg/kg)	ACTION LIMIT (µg/kg)	MEASUREMENT UNCERTAINTY (μg/kg)	RESULT (µg/kg)	RESULT
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	
Ochratoxin A	6.3 / 19.2	20	N/A	ND	PASS
Total Aflatoxin		20		ND	PASS



#### **CERTIFICATE OF ANALYSIS**







#### **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 - 04/10/2025 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Propane	10/20	5000	N/A	ND	PASS
n-Butane	10/50	5000	N/A	ND	PASS
n-Pentane	20/50	5000	N/A	ND	PASS
n-Hexane	2/5	290	N/A	ND	PASS
n-Heptane	20/60	5000	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Toluene	7/21	890	N/A	ND	PASS
Total Xylenes	50 / 160	2170	N/A	ND	PASS
Methanol	50/200	3000	N/A	ND	PASS
Ethanol	20/50	5000	±29.2	1011	PASS
2-Propanol (Isopropyl Alcohol)	10/40	5000	N/A	ND	PASS
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
Dichloromethane (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 - 04/10/2025 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02 / <mark>0.1</mark>	1.5	N/A	ND	PASS
Cadmium	0.02 / <mark>0.05</mark>	0.5	N/A	ND	PASS
Lead	0.04/0.1	0.5	N/A	ND	PASS
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) - 04/12/2025 PASS

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



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**DATE ISSUED 04/12/2025** 



## Microbiology Analysis Continued MICROBIOLOGY TEST RESULTS (PLATING) - 04/12/2025 ND

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

Method: QSP 6794 - Plating with 3M<sup>™</sup> Petrifilm<sup>™</sup>

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

# Foreign Material Analysis

Visual analysis includes, but is not limited to, sand, soil, cinders, dirt, mold, hair, insect fragments, and mammalian excreta.

Method: QSP 1226 - Analysis of Foreign Material in Cannabis and Cannabis Products

#### FOREIGN MATERIAL TEST RESULTS - 04/08/2025 PASS

COMPOUND	ACTION LIMIT	RESULT (per 3 Grams)	RESULT
Hair Count	> 1 per 3 grams	0.0	PASS
Insect Fragment Count	> 1 per 3 grams	0.0	PASS
Mammalian Excreta Count	> 1 per 3 grams	0.0	PASS
Total Sample Area Covered by an Imbedded Foreign Material	>25%	None	PASS
Total Sample Area Covered by Mold	>25%	None	PASS
Total Sample Area Covered by Sand, Soil, Cinders, or Dirt	>25%	None	PASS



#### **Water Activity Analysis**

Method: QSP 1227 - Analysis of Water Activity in Cannabis and Cannabis Products

#### WATER ACTIVITY TEST RESULTS - 04/07/2025 O PASS

COMPOUND	LOD/LOQ (Aw)	ACTION LIMIT (Aw)	MEASUREMENT UNCERTAINTY (Aw)	RESULT (Aw)	RESULT
Water Activity	0.030 / 0.15	0.85	±0.034	0.69	PASS

#### **NOTES**

Reason for Amendment: Add/Remove Test(s) Sample serving mass provided by client. Sample unit mass provided by client.