

# **Hemp Quality Assurance Testing**

## **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 05/16/2023** 

#### SAMPLE NAME: HHC Winter Mint

Concentrate, Product Inhalable

### **CULTIVATOR / MANUFACTURER**

Business Name: License Number: Address:

#### SAMPLE DETAIL

Batch Number: HHCWM1G230419

Sample ID: 230512L028

### **DISTRIBUTOR / TESTED FOR**

**Business Name:** Hazy Ape **License Number:** 

Address:

Date Collected: 05/12/2023

**Date Received:** 05/12/2023

Batch Size: Sample Size: Unit Mass: Serving Size:





Scan QR code to verify authenticity of results.

### **CANNABINOID ANALYSIS - SUMMARY**

Total THC: Not Detected

Total CBD: Not Detected

Sum of Cannabinoids: 74.41%

Total Cannabinoids: 74.41%

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))

 $Sum\ of\ Cannabinoids = \Delta^9\text{-THC} + \text{THCa} + \text{CBD} + \text{CBDa} + \text{CBG} + \text{CBGa} + \text{THCV} + \text{THCVa} + \text{CBC} + \text{CBCa} + \text{CBDV} + \text{CBDVa} + \Delta^8\text{-THC} + \text{CBL} + \text{CBN} + \text{exo-THC} + \Delta^8\text{-THCV} + \Delta^8\text{-iso-THC} + 9\text{S-HHC} + 9\text{R-HHC} + \Delta^{10}\text{-THC} + \text{CBC} + \text$ 

 $\Delta^9$ -THC Acetate

Total Cannabinoids =  $(\Delta^{9}\text{-THC}+0.877^*\text{THCa}) + (\text{CBD}+0.877^*\text{CBDa}) + (\text{CBG}+0.877^*\text{CBGa}) + (\text{THCV}+0.877^*\text{THCVa}) + (\text{CBC}+0.877^*\text{CBCa}) + (\text{CBDV}+0.877^*\text{CBDVa}) + Δ^8\text{-THC} + \text{CBL} + \text{CBN} + \text{exo-THC} + Δ^8\text{-THCV} + Δ^8\text{-iso-THC} + 9\text{S-HHC} + 9\text{R-HHC} + Δ^{10}\text{-THC} + Δ^9\text{-THC} + \text{Cetate}$ 

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.4289%

Menthol 3.392 mg/g

**O** 

α-Bisabolol 0.289 mg/g

β-Caryophyllene 0.228 mg/g

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.

LQC verified by: Josh Antunovich Job Title: Laboratory Manager Date: 05/16/2023 Approved by: Josh Wurzer
Job Title: Chief Compliance Officer
Date: 05/16/2023

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT)



# Hemp Quality Assurance Testing CERTIFICATE OF ANALYSIS







# Cannabinoid Analysis

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

†Analytes not part of our ISO/IEC 17025 scope of accreditation.

**Method:** QSP 1157 - Analysis of Cannabinoids by HPLC-DAD or QSP 34181 - Semisynthetic Cannabinoids Analysis by HPLC

**TOTAL THC: Not Detected** 

Total THC ( $\Delta^9$ -THC+0.877\*THCa)

**TOTAL CBD: Not Detected** 

Total CBD (CBD+0.877\*CBDa)

**TOTAL CANNABINOIDS: 74.41%** 

 $\begin{array}{l} Total\ Cannabinoids\ (Total\ THC)+(Total\ CBD)+\\ (Total\ CBG)+(Total\ THCV)+(Total\ CBC)+\\ (Total\ CBDV)+\Delta^8-THC+CBL+CBN+exo-THC+\Delta^8-THCV+\Delta^8-iso-THC+9S-HHC+9R-HHC+\Delta^{10}-THC+\Delta^9-THC\ Acetate \end{array}$ 

**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 - 05/16/2023**

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
9R-HHC <sup>†</sup>	0.116 / 0.388	±17.5600	694.347	69.4347
9S-HHC <sup>†</sup>	0.056 / 0.186	±1.4258	46.218	4.6218
∆ <sup>8</sup> -THC	0.1 / 0.4	±0.22	3.5	0.35
∆ <sup>9</sup> -THC	0.06 / 0.26	N/A	ND	ND
THCa	0.05 / 0.14	N/A	ND	ND
THCV	0.1 / 0.2	N/A	ND	ND
THCVa	0.07 / 0.20	N/A	ND	ND
CBD	0.07 / 0.29	N/A	ND	ND
CBDa	0.02 / 0.19	N/A	ND	ND
CBDV	0.04 / 0.15	N/A	ND	ND
CBDVa	0.03 / 0.53	N/A	ND	ND
CBG	0.06 / 0.19	N/A	ND	ND
CBGa	0.1 / 0.2	N/A	ND	ND
CBL	0.06 / 0.24	N/A	ND	ND
CBN	0.1 / 0.3	N/A	ND	ND
СВС	0.2 / 0.5	N/A	ND	ND
CBCa	0.07 / 0.28	N/A	ND	ND
$\Delta^{10}$ -THC <sup>†</sup>	0.083 / 0.276	N/A	ND	ND
$\Delta^8$ -iso-THC $^\dagger$	0.053 / 0.176	N/A	ND	ND
Δ <sup>8</sup> -THCV <sup>†</sup>	0.081 / 0.270	N/A	ND	ND
Δ <sup>9</sup> -THC Acetate <sup>†</sup>	0.091 / 0.305	N/A	ND	ND
exo-THC <sup>†</sup>	0.116 / 0.386	N/A	ND	ND
SUM OF CANNAE	BINOIDS		744.1 mg/g	74.41%



# **Terpenoid Analysis**

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

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

### TERPENOID TEST RESULTS - 05/16/2023

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Menthol	0.008 / 0.025	±0.1058	3.392	0.3392
$\alpha$ -Bisabolol	0.008 / 0.026	±0.0120	0.289	0.0289
β-Caryophyllene	0.004/0.012	±0.0063	0.228	0.0228
Isopulegol	0.005 / 0.016	±0.0054	0.172	0.0172
Terpineol	0.009 / 0.031	±0.0040	0.084	0.0084
α-Humulene	0.009/0.029	±0.0013	0.052	0.0052
Citronellol	0.003 / 0.010	±0.0010	0.027	0.0027
Limonene	0.005 / 0.016	±0.0003	0.025	0.0025
Pulegone	0.003 / 0.011	±0.0006	0.020	0.0020

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# Hemp Quality Assurance Testing CERTIFICATE OF ANALYSIS







## Terpenoid Analysis Continued

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### Menthol

A monoterpenoid alcohol with a fragrance that can be described as fresh, cool and herbal. It is responsible for the distinct odor of mint. It is frequently added to cigarettes and mouthwash as a flavorant. Found in mint, sunflower, micromeria, mountain mint, rose geranium, pennyroyal, tarragon, savory, basil, juniper, couch grass, rhubarb, acinos (basil thyme), ironwort, muña...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 $\beta$ -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.

### TERPENOID TEST RESULTS - 05/16/2023 continued

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
β-Pinene	0.004/0.014	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Myrcene	0.008 / 0.025	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
p-Cymene	0.005 / 0.016	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
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<>
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
α-Phellandrene	0.006 / 0.020	N/A	ND	ND
$\Delta^3$ -Carene	0.005/0.018	N/A	ND	ND
α-Terpinene	0.005/0.017	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
Fenchol	0.010 / 0.034	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
Nerol	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
trans-β-Farnesene	0.00 <mark>8/0.025</mark>	N/A	ND	ND
Valencene	0.009/0.030	N/A	ND	ND
Caryophyllene Oxide	0.010 / 0.033	N/A	ND	ND
Guaiol	0.009/0.030	N/A	ND	ND
Cedrol				
Cedioi	0.008/0.027	N/A	ND	ND