

# **Hemp Quality Assurance Testing**

## **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 05/16/2023** 

#### SAMPLE NAME: HHC Electric Apple

Concentrate, Product Inhalable

#### **CULTIVATOR / MANUFACTURER**

**Business Name:** License Number: Address:

#### SAMPLE DETAIL

Batch Number: HHCEA1G230411 Sample ID: 230512L027

#### **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: 74.5%

Total Cannabinoids: 74.50%

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 +  $\Delta^8$ -THC + CBL + CBN + exo-THC +  $\Delta^8$ -THCV +  $\Delta^8$ -iso-THC + 9S-HHC + 9R-HHC +  $\Delta^{10}$ -THC +

Δ9-THC Acetate

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

 $\Delta^{8}$ -iso-THC + 9S-HHC + 9R-HHC +  $\Delta^{10}$ -THC +  $\Delta^{9}$ -THC Acetate

#### **TERPENOID ANALYSIS - SUMMARY**

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 1.3821%

 $\alpha$ -Pinene 3.783 mg/g

Limonene 2.070 mg/g

β-Caryophyllene 2.021 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.

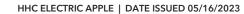
Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

LQC verified by: Josh Antunovich Job Title: Laboratory Manager Date: 05/16/2023

Approved by: Josh Wurzer Title: Chief Compliance Officer Date: 05/16/2023

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









# 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: 74.50%** 

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

**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	±17.6349	697.308	69.7308
9S-HHC <sup>†</sup>	0.056 / 0.186	±1.2862	41.693	4.1693
∆ <sup>8</sup> -THC	0.1 / 0.4	±0.37	6.0	0.60
∆ <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
$\Delta^8$ -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	SUM OF CANNABINOIDS			74.5%



# **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 (%)
α-Pinene	0.005 / 0.017	±0.0253	3.783	0.3783
Limonene	0.005 / 0.016	±0.0230	2.070	0.2070
β-Caryophyllene	0.004/0.012	±0.0560	2.021	0.2021
Myrcene	0.008 / 0.025	±0.0121	1.211	0.1211
β-Pinene	0.004 / 0.014	±0.0070	0.790	0.0790
Linalool	0.009/0.032	±0.0207	0.700	0.0700
Geranyl Acetate	0.004 / 0.014	±0.0170	0.525	0.0525
$\alpha$ -Bisabolol	0.008 / 0.026	±0.0202	0.487	0.0487
α-Humulene	0.009 / 0.029	±0.0117	0.469	0.0469

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# Hemp Quality Assurance Testing CERTIFICATE OF ANALYSIS







### Terpenoid Analysis Continued

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

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#### $\alpha$ -Pinene

One of two isomers of the monoterpene Pinene, the most abundant terpene in the natural world. It is responsible for the distinct aroma of many coniferous trees, particularly pines, from which it derives its name. It is a primary constituent of turpentine. Found in pines, rose gun, parsley, frankincense, guava, juniper, rosemary, nutmeg, blue gum, valerian...etc.



#### Limonene

A monoterpene with a fragrance that can be described as orangey, citrusy, sweet and tart. It is most commonly found in nature as D-Limonene and is a primary contributor to the distinct scent of orange peels, from which it is commonly derived. Found in numerous pines, red maple, silver maple, aspens, cottonwoods, hemlocks, sumac, cedar, junipers...etc.



#### $\beta$ -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.

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Valencene	0.009/0.030	±0.0167	0.311	0.0311
Terpineol	0.009 / 0.031	±0.0144	0.302	0.0302
Fenchol	0.010 / 0.034	±0.0066	0.220	0.0220
trans-β-Farnesene	0.008 / 0.025	±0.0036	0.129	0.0129
Caryophyllene Oxide	0.010 / 0.033	±0.0041	0.114	0.0114
γ-Terpinene	0.006 / 0.018	±0.0015	0.110	0.0110
α-Phellandrene	0.006 / 0.020	±0.0011	0.104	0.0104
p-Cymene	0.005 / 0.016	±0.0020	0.097	0.0097
Camphene	0.005 / 0.015	±0.0008	0.087	0.0087
Terpinolene	0.008 / 0.026	±0.0010	0.061	0.0061
$\Delta^3$ -Carene	0.005 / 0.018	±0.0005	0.048	0.0048
Geraniol	0.002 / 0.007	±0.0016	0.046	0.0046
α-Cedrene	0.005 / 0.016	±0.0009	0.039	0.0039
Citronellol	0.003 / 0.010	±0.0012	0.031	0.0031
Isopulegol	0.005 / 0.016	±0.0008	0.025	0.0025
Nerolidol	0.006/0.019	±0.0010	0.021	0.0021
Nerol	0.003 / 0.011	±0.0007	0.020	0.0020
β-Ocimene	0.006 / 0.020	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Camphor	0.006/0.019	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Menthol	0.008 / 0.025	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Sabinene	0.004 / 0.014	N/A	ND	ND
α-Terpinene	0.005 / 0.017	N/A	ND	ND
Eucalyptol	0.006 / 0.018	N/A	ND	ND
Sabinene Hydrate	0.006 / 0. <mark>022</mark>	N/A	ND	ND
Fenchone	0.009/0.028	N/A	ND	ND
Isoborneol	0.004/0.012	N/A	ND	ND
Borneol	0.005 / 0.016	N/A	ND	ND
Pulegone	0.003 / 0.011	N/A	ND	ND
Guaiol	0.009 / 0.030	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
TOTAL TERPENOIDS			13.821 mg/g	1.3821%