

# **Hemp Quality Assurance Testing**

# **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 10/16/2022** 

SAMPLE NAME: White CBG

Flower, Inhalable

**CULTIVATOR / MANUFACTURER** 

**Business Name:** License Number:

Address:

SAMPLE DETAIL

Batch Number: WCBG\_100122(H)

Sample ID: 221013N060

**DISTRIBUTOR / TESTED FOR** 

Business Name: Sonoma Hills Farm,

IIC.

License Number:

Address: 267 Vienna St San Francisco CA 94112

**Date Collected:** 10/13/2022 Date Received: 10/14/2022

Batch Size:

Sample Size: 6.0 grams

**Unit Mass:** Serving Size:





Scan QR code to verify authenticity of results.

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

Total THC: 0.22%

Total CBD: 0.066%

Sum of Cannabinoids: 20.86%

Total Cannabinoids: 18.4%

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 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) + Δ8-THC + CBL + CBN

CALCULATED USING DRY-WEIGHT

Moisture: 16.3%

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

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 0.9231%

α-Bisabolol 2.709 mg/g

β-Caryophyllene 2.597 mg/g

Guaiol 1.568 mg/g

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

Pesticides: PASS

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)



# Hemp Quality Assurance Testing CERTIFICATE OF ANALYSIS



WHITE CBG | DATE ISSUED 10/16/2022



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

Method: QSP 1157 - Analysis of Cannabinoids by HPLC-DAD

**TOTAL THC: 0.22%**Total THC (Δ<sup>9</sup>-THC+0.877\*THCa)

TOTAL CBD: 0.066%
Total CBD (CBD+0.877\*CBDa)

**TOTAL CANNABINOIDS: 18.4%** 

 $\begin{array}{l} Total \ Cannabinoids \ (Total \ THC) + (Total \ CBD) + \\ (Total \ CBG) + (Total \ THCV) + (Total \ CBC) + \\ (Total \ CBDV) + \Delta^8 - THC + CBL + CBN \end{array}$ 

TOTAL CBG: 17.4%
Total CBG (CBG+0.877\*CBGa)

**TOTAL THCV: ND** 

Total THCV (THCV+0.877\*THCVa)

TOTAL CBC: 0.71%
Total CBC (CBC+0.877\*CBCa)

TOTAL CBDV: ND

Total CBDV (CBDV+0.877\*CBDVa)

# **Terpenoid Analysis**

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

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

#### **CANNABINOID TEST RESULTS - 10/15/2022**

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
CBGa	0.1 / 0.4	±10.33	192.1	19.21
CBCa	0.1 / 0.4	±0.42	6.1	0.61
CBG	0.2 / 0.5	±0.36	5.5	0.55
СВС	0.1 / 0.2	±0.07	1.8	0.18
THCa	0.04 / 0.24	±0.051	1.58	0.158
Δ <sup>9</sup> -THC	0.1 / 0.4	±0.02	0.8	0.08
CBDa	0.06 / 0.22	±0.025	0.75	0.075
$\Delta^8$ -THC	0.05 / 0.50	N/A	ND	ND
THCV	0.07 / 0.21	N/A	ND	ND
THCVa	0.05 / 0.17	N/A	ND	ND
CBD	0.1 / 0.3	N/A	ND	ND
CBDV	0.1 / 0.3	N/A	ND	ND
CBDVa	0.02 / 0.22	N/A	ND	ND
CBL	0.1 / 0.4	N/A	ND	ND
CBN	0.07 / 0.20	N/A	ND	ND
SUM OF CANNABINOIDS			208.6 mg/g	20.86%

#### MOISTURE TEST RESULT

16.3%

Tested 10/14/2022

Method: QSP 1224 - Loss on Drying (Moisture)

### TERPENOID TEST RESULTS - 10/15/2022

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
α-Bisabolol	0.008 / 0.026	±0.1165	2.709	0.2709
β-Caryophyllene	0.004 / 0.013	±0.1397	2.597	0.2597
Guaiol	0.011/0.035	±0.0853	1.568	0.1568
α-Humulene	0.009/0.031	±0.0424	0.789	0.0789
Nerolidol	0.006 / 0.020	±0.0301	0.381	0.0381
Myrcene	0.007 / 0.025	±0.0108	0.306	0.0306
Limonene	0.005 / 0.016	±0.0060	0.185	0.0185
Caryophyllene Oxide	0.011/0.038	±0.0073	0.123	0.0123
Geranyl Acetate	0.004 / 0.012	±0.0058	0.105	0.0105
trans-β-Farnesene	0.008 / 0.028	±0.0054	0.095	0.0095

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## Terpenoid Analysis Continued

## 1 $\alpha$ -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.

2  $\beta$ -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.

## 3 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 - 10/15/2022 continued

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Fenchol	0.009/0.029	±0.0033	0.090	0.0090
Borneol	0.004 / 0.014	±0.0039	0.083	0.0083
Linalool	0.009 / 0.030	±0.0029	0.075	0.0075
Terpineol	0.008 / 0.025	±0.0034	0.055	0.0055
Valencene	0.010 / 0.033	±0.0023	0.045	0.0045
Pulegone	0.003 / 0.010	±0.0017	0.025	0.0025
α-Pinene	0.005 / 0.015	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
β-Pinene	0.004 / 0.015	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Fenchone	0.008 / 0.026	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Terpinolene	0.008 / 0.027	N/A	<loq< td=""><td><loq< td=""></loq<></td></loq<>	<loq< td=""></loq<>
Camphene	0.004 / 0.014	N/A	ND	ND
Sabinene	0.004 / 0.014	N/A	ND	ND
α-Phellandrene	0.006 / 0.019	N/A	ND	ND
$\Delta^3$ -Carene	0.005 / 0.018	N/A	ND	ND
α-Terpinene	0.006 / 0.019	N/A	ND	ND
p-Cymene	0.005 / 0.015	N/A	ND	ND
Eucalyptol	0.005 / 0.018	N/A	ND	ND
β-Ocimene	0.005 / 0.018	N/A	ND	ND
γ-Terpinene	0.005 / 0.018	N/A	ND	ND
Sabinene Hydrate	0.007/0.022	N/A	ND	ND
Isopulegol	0.004 / 0.013	N/A	ND	ND
Camphor	0.005 / 0.015	N/A	ND	ND
Isoborneol	0.003/0.011	N/A	ND	ND
Menthol	0.008 / 0.025	N/A	ND	ND
Nerol	0.003/0.011	N/A	ND	ND
Citronellol	0.003/0.010	N/A	ND	ND
Geraniol	0.002/0.007	N/A	ND	ND
α-Cedrene	0.005 / 0.017	N/A	ND	ND
Cedrol	0.009/0.032	N/A	ND	ND
TOTAL TERPENOIDS			9.231 mg/g	0.9231%



# **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 - 10/15/2022 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Chlordane*	0.03/0.08	≥LOD	N/A	ND	PASS
Chlorfenapyr*	0.03 / 0.10	≥LOD	N/A	ND	PASS
Pentachloronitrobenzene*	0.03 / 0.09	0.1	N/A	ND	PASS