

### **Hemp Quality Assurance Testing**

## **CERTIFICATE OF ANALYSIS**

**DATE ISSUED 03/22/2021** 

SAMPLE NAME: Bubba Kush 39 D8

Flower, Inhalable

**CULTIVATOR / MANUFACTURER** 

Business Name: License Number:

Address:

SAMPLE DETAIL

**Batch Number:** 

Sample ID: 210318W023

**DISTRIBUTOR / TESTED FOR** 

Business Name: MHF Group, Inc.

License Number:

Address:





Date Collected: 03/18/2021
Date Received: 03/18/2021

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



Scan QR code to verify authenticity of results.

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

Total THC: 0.564%

Total CBD: 11.526%

Sum of Cannabinoids: 19.641%

Total Cannabinoids: 17.974%

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 =  $\Delta$ 9THC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids = Δ9THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ8THC + CBL + CBN Total Cannabinoids = (Δ9THC+0.877\*THCa) + (CBD+0.877\*CBDa) + (CBG+0.877\*CBGa) + (THCV+0.877\*THCVa) + (CBC+0.877\*CBCa) +

(CBDV+0.877\*CBDVa) + Δ8THC + CBL + CBN

Moisture: NT

Density: NT

Viscosity: NT

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

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 1.2547%

**β** C

 $\beta$  Caryophyllene 2.997 mg/g

 $\alpha$  Bisabolol 1.699 mg/g

Limonene 1.557 mg/g

#### SAFETY ANALYSIS - SUMMARY

Pesticides: NT

Heavy Metals: NT

Foreign Material: NT

Mycotoxins: NT

Microbial Impurities (PCR): NT

Water Activity: NT

tachhouse

Residual Solvents: NT

Microbial Impurities (Plating): NT

Vitamin E: NT

For quality assurance purposes. Not a Pre-Harvest 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 16 Effect Date January 16, 2019. Authority: Section 26013, 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)

LQC verified by: Carmen Stackhouse Date: 03/22/2021

Approved by: Josh Wurzer, President Date: 03/22/2021



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# BUBBA KUSH 39 D8 | DATE ISSUED 03/22/2021

# 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: 0.564%**Total THC (Δ9THC+0.877\*THCa)

TOTAL CBD: 11.526%
Total CBD (CBD+0.877\*CBDa)

**TOTAL CANNABINOIDS: 17.974%** 

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) +  $\Delta$ 8THC + CBL + CBN

TOTAL CBG: 0.27%
Total CBG (CBG+0.877\*CBGa)

**TOTAL THCV: ND** 

Total THCV (THCV+0.877\*THCVa)

TOTAL CBC: 0.66%
Total CBC (CBC+0.877\*CBCa)

TOTAL CBDV: 0.03%
Total CBDV (CBDV+0.877\*CBDVa)

#### **CANNABINOID TEST RESULTS - 03/20/2021**

	COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Ī	CBDa	0.06 / 0.22	±5.118	121.28	12.128
	Δ8ΤΗC	0.05 / 0.50	±1.965	49.24	4.924
	CBD	0.1 / 0.3	±0.49	8.9	0.89
	CBCa	0.1/0.4	±0.58	6.6	0.66
	THCa	0.04 / 0.24	±0.171	4.15	0.415
	CBGa	0.1 / 0.4	±0.21	3.1	0.31
	Δ9ΤΗС	0.1 / 0.4	±0.08	2.0	0.20
	СВС	0.1/0.2	±0.04	0.8	0.08
	CBDVa	0.02 / 0.22	±0.004	0.34	0.034
	CBG	0.2 / 0.5	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
	THCV	0.07 / 0.21	N/A	ND	ND
	THCVa	0.05 / 0.17	N/A	ND	ND
	CBDV	0.1 / 0.3	N/A	ND	ND
	CBL	0.1 / 0.4	N/A	ND	ND
	CBN	0.07 / 0.20	N/A	ND	ND
	SUM OF CANNAB	INOIDS	196.41 mg/g	19.641%	

MOISTURE TEST RESULT	DENSITY TEST RESULT	VISCOSITY TEST RESULT
Not Tested	Not Tested	Not Tested





## **Hemp Quality Assurance Testing**

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## **Terpenoid Analysis**

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

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



#### β 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.



#### $\alpha$ 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.



#### 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.



COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
β Caryophyllene	0.004 / 0.013	±0.2074	2.997	0.2997
$\alpha$ Bisabolol	0.008 / 0.026	±0.0940	1.699	0.1699
Limonene	0.005/0.016	±0.0652	1.557	0.1557
Myrcene	0.007 / 0.025	±0.0634	1.396	0.1396
Linalool	0.009/0.030	±0.0624	1.235	0.1235
$\alpha$ Humulene	0.009/0.031	±0.0636	0.920	0.0920
Guaiol	0.011/0.035	±0.0404	0.579	0.0579
trans-β-Farnesene	0.008 / 0.028	±0.0386	0.528	0.0528
Terpineol	0.014 / 0.046	±0.0207	0.263	0.0263
β Pinene	0.004 / 0.015	±0.0098	0.237	0.0237
Fenchol	0.009/0.029	±0.0105	0.221	0.0221
Nerolidol	0.008 / 0.028	±0.0197	0.194	0.0194
Caryophyllene Oxide	0.011/0.038	±0.0124	0.163	0.0163
α Pinene	0.005 / 0.015	±0.0074	0.160	0.0160
Valencene	0.010 / 0.033	±0.0102	0.154	0.0154
Eucalyptol	0.005/0.018	±0.0038	0.074	0.0074
Borneol	0.004 / 0.014	±0.0043	0.071	0.0071
Camphene	0.004 / 0.014	±0.0014	0.034	0.0034
Fenchone	0.008 / 0.026	±0.0014	0.030	0.0030
Sabinene Hydrate	0.007 / 0.022	±0.0011	0.024	0.0024
Citronellol	0.003/0.010	±0.0004	0.011	0.0011
γTerpinene	0.005/0.018	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
Terpinolene	0.008 / 0.027	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
Nerol	0.003/0.011	N/A	<loq< th=""><th><loq< th=""></loq<></th></loq<>	<loq< th=""></loq<>
Sabinene	0.004 / 0.014	N/A	ND	ND
α Phellandrene	0.006/0.019	N/A	ND	ND
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
Ocimene	0.015 / 0.034	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
R-(+)-Pulegone	0.003 / 0.010	N/A	ND	ND
Geraniol	0.002 / 0.007	N/A	ND	ND
Geranyl Acetate	0.004/0.012	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			12.547 mg/g	1.2547%

