



## 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: 15.510 mg/unit

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

### TOTAL CBD: 4991.640 mg/unit

Total CBD (CBD+0.877\*CBDa)

### TOTAL CANNABINOIDS: 5067.690 mg/unit

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

### TOTAL CBG: 8.340 mg/unit

Total CBG (CBG+0.877\*CBGa)

### TOTAL THCV: ND

Total THCV (THCV+0.877\*THCVa)

### TOTAL CBC: 19.020 mg/unit

Total CBC (CBC+0.877\*CBCa)

### TOTAL CBDV: 21.330 mg/unit

Total CBDV (CBDV+0.877\*CBDVa)

## CANNABINOID TEST RESULTS - 11/24/2021

COMPOUND	LOD/LOQ (mg/mL)	MEASUREMENT UNCERTAINTY (mg/mL)	RESULT (mg/mL)	RESULT (%)
CBD	0.004 / 0.011	±7.9700	166.388	17.3991
CBDV	0.002 / 0.012	±0.0373	0.711	0.0743
CBC	0.003 / 0.010	±0.0262	0.634	0.0663
$\Delta 9$ THC	0.002 / 0.014	±0.0364	0.517	0.0541
CBN	0.001 / 0.007	±0.0123	0.334	0.0349
CBG	0.002 / 0.006	±0.0173	0.278	0.0291
CBL	0.003 / 0.010	±0.0029	0.061	0.0064
THCa	0.001 / 0.005	N/A	ND	ND
$\Delta 8$ THC	0.01 / 0.02	N/A	ND	ND
THCV	0.002 / 0.012	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
CBCa	0.001 / 0.015	N/A	ND	ND
<b>SUM OF CANNABINOIDS</b>			<b>168.923 mg/mL</b>	<b>17.6642%</b>

## Unit Mass: 30 milliliters per Unit

$\Delta 9$ THC per Unit	15.510 mg/unit
Total THC per Unit	15.510 mg/unit
CBD per Unit	4991.640 mg/unit
Total CBD per Unit	4991.640 mg/unit
Sum of Cannabinoids per Unit	5067.690 mg/unit
Total Cannabinoids per Unit	5067.690 mg/unit

## DENSITY TEST RESULT

0.9563 g/mL

Tested 11/24/2021

**Method:** QSP 7870 - Sample Preparation



## Terpenoid Analysis

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

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

### 1 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.

### 2 $\alpha$ Humulene

Also known as  $\alpha$ -caryophyllene, it is an isomer of the sesquiterpene  $\beta$ -Caryophyllene which frequently occurs in nature with many aromatic plants across the globe. It has a fragrance that can be described as earthy or musky with spicy undertones. Found in hops, forskohlii, skullcaps, basil, nutmeg, cloves, sage, cotton, tamarind, black pepper, guava, Scotch pine...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 - 11/25/2021

COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Limonene	0.005 / 0.016	±0.0855	5.978	0.5978
$\alpha$ Humulene	0.009 / 0.029	±0.0694	2.162	0.2162
$\beta$ Caryophyllene	0.004 / 0.012	±0.0753	2.114	0.2114
Myrcene	0.008 / 0.025	±0.0137	1.060	0.1060
$\alpha$ Bisabolol	0.008 / 0.026	±0.0562	1.052	0.1052
$\beta$ Pinene	0.004 / 0.014	±0.0092	0.799	0.0799
$\alpha$ Pinene	0.005 / 0.017	±0.0061	0.713	0.0713
Linalool	0.009 / 0.032	±0.0260	0.684	0.0684
$\gamma$ Terpinene	0.006 / 0.018	±0.0054	0.313	0.0313
Terpinolene	0.008 / 0.026	±0.0051	0.250	0.0250
3 Carene	0.005 / 0.018	±0.0016	0.113	0.0113
Caryophyllene Oxide	0.010 / 0.033	±0.0033	0.071	0.0071
$\alpha$ Phellandrene	0.006 / 0.020	±0.0009	0.068	0.0068
Nerolidol	0.009 / 0.028	±0.0041	0.065	0.0065
Sabinene	0.004 / 0.014	±0.0006	0.052	0.0052
p-Cymene	0.005 / 0.016	±0.0008	0.028	0.0028
Nerol	0.003 / 0.011	±0.0009	0.020	0.0020
Camphene	0.005 / 0.015	±0.0002	0.016	0.0016
Geranyl Acetate	0.004 / 0.014	±0.0007	0.016	0.0016
$\alpha$ Terpinene	0.005 / 0.017	N/A	<LOQ	<LOQ
Terpineol	0.016 / 0.055	N/A	<LOQ	<LOQ
Guaiol	0.009 / 0.030	N/A	<LOQ	<LOQ
Eucalyptol	0.006 / 0.018	N/A	ND	ND
Ocimene	0.011 / 0.038	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
(-)-Isopulegol	0.005 / 0.016	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
Menthol	0.008 / 0.025	N/A	ND	ND
Citronellol	0.003 / 0.010	N/A	ND	ND
R-(+)-Pulegone	0.003 / 0.011	N/A	ND	ND
Geraniol	0.002 / 0.007	N/A	ND	ND
$\alpha$ Cedrene	0.005 / 0.016	N/A	ND	ND
trans- $\beta$ -Farnesene	0.008 / 0.025	N/A	ND	ND
Valencene	0.009 / 0.030	N/A	ND	ND
Cedrol	0.008 / 0.027	N/A	ND	ND
<b>TOTAL TERPENOIDS</b>			<b>15.574 mg/g</b>	<b>1.5574%</b>





## Pesticide Analysis

PESTICIDE TEST RESULTS - 11/27/2021 ✔ PASS

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

Exclusions<sup>1</sup> see last page

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
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
Chlorpyrifos	0.02 / 0.06	≥ LOD	N/A	ND	PASS
Cypermethrin	0.11 / 0.32	1	N/A	ND	PASS
Etoxazole	0.02 / 0.06	1.5	N/A	ND	PASS
Hexythiazox	0.02 / 0.07	2	N/A	ND	PASS
Imidacloprid	0.04 / 0.11	3	N/A	ND	PASS
Malathion	0.03 / 0.09	5	N/A	ND	PASS
Myclobutanil	0.03 / 0.09	9	N/A	ND	PASS
Permethrin	0.04 / 0.12	20	N/A	ND	PASS
Piperonylbutoxide	0.02 / 0.07	8	N/A	<LOQ	PASS
Propiconazole	0.02 / 0.07	20	N/A	ND	PASS
Spiromesifen	0.02 / 0.05	12	N/A	ND	PASS
Tebuconazole	0.02 / 0.07	2	N/A	ND	PASS
Trifloxystrobin	0.03 / 0.08	30	N/A	ND	PASS



## Mycotoxin Analysis

MYCOTOXIN TEST RESULTS - 11/25/2021 ✔ PASS

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

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

Exclusions<sup>2</sup> see last page

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	
Total Aflatoxin		20		ND	PASS
Ochratoxin A	6.3 / 19.2	20	N/A	ND	PASS



## Residual Solvents Analysis

RESIDUAL SOLVENTS TEST RESULTS - 11/25/2021 ✔ PASS

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

**Method:** QSP 1204 - Analysis of Residual Solvents by GC-MS

Exclusions<sup>3</sup> see last page

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
Butane	10 / 50	5000	N/A	ND	PASS
Pentane	20 / 50	5000	N/A	ND	PASS
Hexane	2 / 5	290	N/A	ND	PASS
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

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 **Residual Solvents Analysis**  
Continued

RESIDUAL SOLVENTS TEST RESULTS - 11/25/2021 *continued*  **PASS**

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

Method: QSP 1204 - Analysis of Residual Solvents by GC-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Total Xylenes	50 / 160	2170	N/A	ND	PASS
Methanol	50 / 200	3000	N/A	ND	PASS
Ethanol	20 / 50	5000	N/A	ND	PASS
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
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 METALS TEST RESULTS - 11/24/2021  **PASS**

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS).

Method: QSP 1160 - Analysis of Heavy Metals by ICP-MS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (µg/g)	RESULT (µg/g)	RESULT
Arsenic	0.02 / 0.1	0.42	N/A	ND	PASS
Cadmium	0.02 / 0.05	0.27	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Mercury	0.002 / 0.01	0.4	N/A	ND	PASS

 **Microbiology Analysis**  
PCR AND PLATING

MICROBIOLOGY TEST RESULTS (PCR) - 11/26/2021  **PASS**

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants.

Method: QSP 1221 - Analysis of Microbiological Contaminants

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)	RESULT
Shiga toxin-producing <i>Escherichia coli</i>	Not Detected in 1g	ND	PASS
<i>Salmonella</i> spp.	Not Detected in 1g	ND	PASS
Bile-Tolerant Gram-Negative Bacteria	100	ND	PASS
<i>Staphylococcus aureus</i>	Not Detected in 1g	ND	PASS



 **Microbiology Analysis** *Continued* MICROBIOLOGY TEST RESULTS (PLATING) - 11/26/2021  **PASS**

PCR AND PLATING

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbiological contaminants.

**Method:** OSP 6794 - Plating with 3M™ Petrifilm™

COMPOUND	ACTION LIMIT (cfu/g)	RESULT (cfu/g)	RESULT
Total Aerobic Bacteria	100	ND	PASS
Total Yeast and Mold	10	ND	PASS

**NOTES**

1. Exclusions: Sample Certification: California Code of Regulation Title 4 Division 19
2. Exclusions: Sample Certification: California Code of Regulation Title 4 Division 19
3. Exclusions: Sample Certification: California Code of Regulation Title 4 Division 19

