

SAMPLE NAME: Sample 11.17.20-01

Flower, Hemp Flower

CULTIVATOR / MANUFACTURER

Business Name:

License Number:

Address:



SAMPLE DETAIL

Batch Number: Sample 11.17.20-01

Sample ID: 201117W005

Date Collected: 11/17/2020

Date Received: 11/17/2020

Batch Size:

Sample Size: 1.0 grams

Unit Mass:

Serving Size:



Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

CALCULATED USING DRY-WEIGHT

Total THC: 0.285%

Total CBD: 7.833%

Sum of Cannabinoids: 10.066%

Total Cannabinoids: 9.094%

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 = $\Delta 9\text{THC} + (\text{THCa} \cdot 0.877)$

Total CBD = $\text{CBD} + (\text{CBDa} \cdot 0.877)$

Sum of Cannabinoids = $\Delta 9\text{THC} + \text{THCa} + \text{CBD} + \text{CBDa} + \text{CBG} + \text{CBGa} + \text{THCV} + \text{THCVa} + \text{CBC} + \text{CBCa} + \text{CBDV} + \text{CBDVa} + \Delta 8\text{THC} + \text{CBL} + \text{CBN}$

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

Moisture: 9.7%

Density: NT

Viscosity: NT

SAFETY ANALYSIS - SUMMARY

Pesticides: ✔ PASS

Mycotoxins: ✔ PASS

Residual Solvents: NT

Heavy Metals: ✔ PASS

Microbial Impurities (PCR): ✔ PASS

Microbial Impurities (Plating): NT

Foreign Material: ✔ PASS

Water Activity: ✔ PASS

Vitamin E Acetate: NT

TERPENOID ANALYSIS - SUMMARY

36 TESTED, TOP 3 HIGHLIGHTED

● **β Caryophyllene 0.73 mg/g**

● **α Bisabolol 0.6 mg/g**

● **Myrcene 0.3 mg/g**

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: Michael Pham
 Date: 11/21/2020



Approved by: Josh Wurzer, President
 Date: 11/21/2020



CANNABINOID TEST RESULTS - 11/18/2020

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: 0.285%

Total THC ($\Delta 9\text{THC} + 0.877 \cdot \text{THCa}$)

TOTAL CBD: 7.833%

Total CBD ($\text{CBD} + 0.877 \cdot \text{CBDa}$)

TOTAL CANNABINOIDS: 9.094%

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

TOTAL CBG: 0.49%

Total CBG ($\text{CBG} + 0.877 \cdot \text{CBGa}$)

TOTAL THCV: ND

Total THCV ($\text{THCV} + 0.877 \cdot \text{THCVa}$)

TOTAL CBC: 0.43%

Total CBC ($\text{CBC} + 0.877 \cdot \text{CBCa}$)

TOTAL CBDV: 0.056%

Total CBDV ($\text{CBDV} + 0.877 \cdot \text{CBDVa}$)

| COMPOUND | LOD/LOQ (mg/g) | MEASUREMENT UNCERTAINTY (mg/g) | RESULT (mg/g) | RESULT (%) |
|----------------------------|----------------|--------------------------------|--------------------|----------------|
| CBDa | 0.06 / 0.17 | ±2.908 | 68.91 | 6.891 |
| CBD | 0.1 / 0.3 | ±0.98 | 17.9 | 1.79 |
| CBGa | 0.1 / 0.4 | ±0.31 | 4.5 | 0.45 |
| CBCa | 0.1 / 0.4 | ±0.29 | 3.3 | 0.33 |
| $\Delta 9\text{THC}$ | 0.1 / 0.4 | ±0.07 | 1.7 | 0.17 |
| CBC | 0.1 / 0.2 | ±0.07 | 1.4 | 0.14 |
| THCa | 0.04 / 0.12 | ±0.054 | 1.31 | 0.131 |
| CBG | 0.2 / 0.5 | ±0.09 | 1.0 | 0.10 |
| CBDVa | 0.02 / 0.06 | ±0.007 | 0.64 | 0.064 |
| CBDV | 0.1 / 0.3 | N/A | <LOQ | <LOQ |
| $\Delta 8\text{THC}$ | 0.05 / 0.15 | N/A | ND | ND |
| THCV | 0.07 / 0.21 | N/A | ND | ND |
| THCVa | 0.05 / 0.15 | 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 | | | 100.66 mg/g | 10.066% |

MOISTURE TEST RESULT

| |
|---|
| <p>9.7%</p> <p>Tested 11/20/2020</p> <p>Method: QSP 1224 - Loss on Drying (Moisture)</p> |
|---|

DENSITY TEST RESULT

| |
|-------------------|
| <p>Not Tested</p> |
|-------------------|

VISCOSITY TEST RESULT

| |
|-------------------|
| <p>Not Tested</p> |
|-------------------|





Terpenoid Analysis

Terpene analysis utilizing gas chromatography-flame ionization detection (GC-FID). Terpenes are the aromatic compounds that endow cannabis with their unique scent and effect. Following are the primary terpenes detected.

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

1 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 CB₂ receptor agonist. Found in black pepper, clove, hops, rosemary, black-jack, perilla, spicebush, Indian pennywort, celery, frankincense, vitex, parsley, marigold, tamarind...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 Myrcene

A monoterpene with a fragrance that can be described as peppery, spicy, herbal, floral and woody. Although it has a pleasant odor, it is typically used by the perfume industry as precursor for developing other fragrances. Found in hops, houttuynia, bay, thyme, lemon grass, mango, verbena, cardamom, citrus...etc.

TERPENOID TEST RESULTS - 11/19/2020

| COMPOUND | LOD/LOQ (mg/g) | MEASUREMENT UNCERTAINTY (mg/g) | RESULT (mg/g) | RESULT (%) |
|-------------------------|----------------|--------------------------------|------------------|---------------|
| β Caryophyllene | 0.04 / 0.11 | ±0.027 | 0.73 | 0.073 |
| α Bisabolol | 0.1 / 0.2 | ±0.04 | 0.6 | 0.06 |
| Myrcene | 0.1 / 0.2 | ±0.01 | 0.3 | 0.03 |
| α Humulene | 0.03 / 0.08 | ±0.006 | 0.29 | 0.029 |
| Guaiol | 0.04 / 0.13 | ±0.009 | 0.19 | 0.019 |
| α Pinene | 0.04 / 0.13 | N/A | <LOQ | <LOQ |
| Limonene | 0.04 / 0.12 | N/A | <LOQ | <LOQ |
| Terpineol | 0.03 / 0.1 | N/A | <LOQ | <LOQ |
| R-(+)-Pulegone | 0.04 / 0.1 | N/A | <LOQ | <LOQ |
| Nerolidol | 0.03 / 0.09 | N/A | <LOQ | <LOQ |
| Caryophyllene Oxide | 0.1 / 0.2 | N/A | <LOQ | <LOQ |
| Camphene | 0.1 / 0.2 | N/A | ND | ND |
| Sabinene | 0.1 / 0.2 | N/A | ND | ND |
| β Pinene | 0.1 / 0.2 | N/A | ND | ND |
| α Phellandrene | 0.1 / 0.2 | N/A | ND | ND |
| 3 Carene | 0.1 / 0.2 | N/A | ND | ND |
| α Terpinene | 0.1 / 0.2 | N/A | ND | ND |
| Eucalyptol | 0.1 / 0.2 | N/A | ND | ND |
| Ocimene | 0.05 / 0.1 | N/A | ND | ND |
| γ Terpinene | 0.1 / 0.2 | N/A | ND | ND |
| Sabinene Hydrate | 0.1 / 0.2 | N/A | ND | ND |
| Fenchone | 0.1 / 0.2 | N/A | ND | ND |
| Terpinolene | 0.04 / 0.1 | N/A | ND | ND |
| Linalool | 0.04 / 0.1 | N/A | ND | ND |
| Fenchol | 0.1 / 0.2 | N/A | ND | ND |
| (-)-Isopulegol | 0.03 / 0.08 | N/A | ND | ND |
| Camphor | 0.1 / 0.3 | N/A | ND | ND |
| Isoborneol | 0.1 / 0.2 | N/A | ND | ND |
| Borneol | 0.1 / 0.3 | N/A | ND | ND |
| Menthol | 0.04 / 0.1 | N/A | ND | ND |
| Nerol | 0.05 / 0.1 | N/A | ND | ND |
| Geraniol | 0.04 / 0.11 | N/A | ND | ND |
| Geranyl Acetate | 0.03 / 0.10 | N/A | ND | ND |
| α Cedrene | 0.03 / 0.10 | N/A | ND | ND |
| Valencene | 0.02 / 0.06 | N/A | ND | ND |
| Cedrol | 0.1 / 0.2 | N/A | ND | ND |
| TOTAL TERPENOIDS | | | 2.11 mg/g | 0.211% |





Pesticide Analysis

CATEGORY 1 PESTICIDE TEST RESULTS - 11/20/2020 ✔ PASS

CATEGORY 1 AND 2 PESTICIDES

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

| COMPOUND | LOD/LOQ (µg/g) | ACTION LIMIT (µg/g) | MEASUREMENT UNCERTAINTY (µg/g) | RESULT (µg/g) | RESULT |
|-------------------|----------------|---------------------|--------------------------------|---------------|--------|
| Aldicarb | 0.03 / 0.09 | ≥ LOD | N/A | ND | PASS |
| Carbofuran | 0.01 / 0.04 | ≥ LOD | N/A | ND | PASS |
| Chlordane* | 0.03 / 0.08 | ≥ LOD | N/A | ND | PASS |
| Chlorfenapyr* | 0.03 / 0.10 | ≥ LOD | N/A | ND | PASS |
| Chlorpyrifos | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Coumaphos | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Daminozide | 0.03 / 0.10 | ≥ LOD | N/A | ND | PASS |
| DDVP (Dichlorvos) | 0.02 / 0.07 | ≥ LOD | N/A | ND | PASS |
| Dimethoate | 0.02 / 0.07 | ≥ LOD | N/A | ND | PASS |
| Ethoprop(hos) | 0.03 / 0.08 | ≥ LOD | N/A | ND | PASS |
| Etofenprox | 0.02 / 0.05 | ≥ LOD | N/A | ND | PASS |
| Fenoxycarb | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Fipronil | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Imazalil | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Methiocarb | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Methyl parathion | 0.03 / 0.10 | ≥ LOD | N/A | ND | PASS |
| Mevinphos | 0.03 / 0.09 | ≥ LOD | N/A | ND | PASS |
| Paclobutrazol | 0.02 / 0.05 | ≥ LOD | N/A | ND | PASS |
| Propoxur | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Spiroxamine | 0.02 / 0.05 | ≥ LOD | N/A | ND | PASS |
| Thiacloprid | 0.03 / 0.07 | ≥ LOD | N/A | ND | PASS |

CATEGORY 2 PESTICIDE TEST RESULTS - 11/20/2020 ✔ PASS

| | | | | | |
|---------------------|-------------|-----|-----|----|------|
| Abamectin | 0.03 / 0.10 | 0.1 | N/A | ND | PASS |
| Acephate | 0.01 / 0.04 | 0.1 | N/A | ND | PASS |
| Acequinocyl | 0.02 / 0.05 | 0.1 | N/A | ND | PASS |
| Acetamiprid | 0.02 / 0.05 | 0.1 | N/A | ND | PASS |
| Azoxystrobin | 0.01 / 0.04 | 0.1 | N/A | ND | PASS |
| Bifenazate | 0.01 / 0.02 | 0.1 | N/A | ND | PASS |
| Bifenthrin | 0.01 / 0.02 | 3 | N/A | ND | PASS |
| Boscalid | 0.02 / 0.06 | 0.1 | N/A | ND | PASS |
| Captan | 0.2 / 0.5 | 0.7 | N/A | ND | PASS |
| Carbaryl | 0.01 / 0.02 | 0.5 | N/A | ND | PASS |
| Chlorantraniliprole | 0.01 / 0.03 | 10 | N/A | ND | PASS |

Continued on next page





Pesticide Analysis *Continued*

CATEGORY 2 PESTICIDE TEST RESULTS - 11/20/2020 *continued* ✔ PASS

CATEGORY 1 AND 2 PESTICIDES

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

| COMPOUND | LOD/LOQ (µg/g) | ACTION LIMIT (µg/g) | MEASUREMENT UNCERTAINTY (µg/g) | RESULT (µg/g) | RESULT |
|--------------------------|----------------|---------------------|--------------------------------|---------------|--------|
| Clofentezine | 0.02 / 0.06 | 0.1 | N/A | ND | PASS |
| Cyfluthrin | 0.1 / 0.4 | 2 | N/A | ND | PASS |
| Cypermethrin | 0.1 / 0.3 | 1 | N/A | ND | PASS |
| Diazinon | 0.01 / 0.04 | 0.1 | N/A | ND | PASS |
| Dimethomorph | 0.01 / 0.03 | 2 | N/A | ND | PASS |
| Etoxazole | 0.010 / 0.028 | 0.1 | N/A | ND | PASS |
| Fenhexamid | 0.02 / 0.1 | 0.1 | N/A | ND | PASS |
| Fenpyroximate | 0.03 / 0.08 | 0.1 | N/A | ND | PASS |
| Flonicamid | 0.01 / 0.04 | 0.1 | N/A | ND | PASS |
| Fludioxonil | 0.03 / 0.08 | 0.1 | N/A | ND | PASS |
| Hexythiazox | 0.01 / 0.04 | 0.1 | N/A | ND | PASS |
| Imidacloprid | 0.01 / 0.04 | 5 | N/A | ND | PASS |
| Kresoxim-methyl | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Malathion | 0.02 / 0.05 | 0.5 | N/A | ND | PASS |
| Metalaxyl | 0.02 / 0.06 | 2 | N/A | ND | PASS |
| Methomyl | 0.03 / 0.1 | 1 | N/A | ND | PASS |
| Myclobutanil | 0.03 / 0.1 | 0.1 | N/A | ND | PASS |
| Naled | 0.03 / 0.1 | 0.1 | N/A | ND | PASS |
| Oxamyl | 0.02 / 0.06 | 0.5 | N/A | ND | PASS |
| Pentachloronitrobenzene* | 0.03 / 0.09 | 0.1 | N/A | ND | PASS |
| Permethrin | 0.03 / 0.09 | 0.5 | N/A | ND | PASS |
| Phosmet | 0.03 / 0.10 | 0.1 | N/A | ND | PASS |
| Piperonylbutoxide | 0.003 / 0.009 | 3 | N/A | ND | PASS |
| Prallethrin | 0.03 / 0.08 | 0.1 | N/A | ND | PASS |
| Propiconazole | 0.01 / 0.03 | 0.1 | N/A | ND | PASS |
| Pyrethrins | 0.03 / 0.08 | 0.5 | N/A | ND | PASS |
| Pyridaben | 0.006 / 0.019 | 0.1 | N/A | ND | PASS |
| Spinetoram | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Spinosad | 0.02 / 0.06 | 0.1 | N/A | ND | PASS |
| Spiromesifen | 0.02 / 0.05 | 0.1 | N/A | ND | PASS |
| Spirotetramat | 0.01 / 0.02 | 0.1 | N/A | ND | PASS |
| Tebuconazole | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Thiamethoxam | 0.03 / 0.08 | 5 | N/A | ND | PASS |
| Trifloxystrobin | 0.01 / 0.03 | 0.1 | N/A | ND | PASS |





Mycotoxin Analysis

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

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

MYCOTOXIN TEST RESULTS - 11/20/2020 ✔ PASS

| COMPOUND | LOD/LOQ (µg/kg) | ACTION LIMIT (µg/kg) | MEASUREMENT UNCERTAINTY (µg/kg) | RESULT (µg/kg) | RESULT |
|-----------------|-----------------|----------------------|---------------------------------|----------------|--------|
| Aflatoxin B1 | 2.0 / 6.0 | 20 | N/A | ND | PASS |
| Aflatoxin B2 | 1.8 / 5.6 | 20 | N/A | ND | PASS |
| Aflatoxin G1 | 1.0 / 3.1 | 20 | N/A | ND | PASS |
| Aflatoxin G2 | 1.2 / 3.5 | 20 | N/A | ND | PASS |
| Total Aflatoxin | | 20 | | ND | PASS |
| Ochratoxin A | 6.3 / 19.2 | 20 | N/A | ND | PASS |



Heavy Metals Analysis

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

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

HEAVY METALS TEST RESULTS - 11/21/2020 ✔ PASS

| COMPOUND | LOD/LOQ (µg/g) | ACTION LIMIT (µg/g) | MEASUREMENT UNCERTAINTY (µg/g) | RESULT (µg/g) | RESULT |
|----------|----------------|---------------------|--------------------------------|---------------|--------|
| Cadmium | 0.02 / 0.05 | 0.2 | N/A | <LOQ | PASS |
| Lead | 0.04 / 0.1 | 0.5 | ±0.01 | 0.4 | PASS |
| Arsenic | 0.02 / 0.1 | 0.2 | ±0.01 | 0.2 | PASS |
| Mercury | 0.002 / 0.01 | 0.1 | N/A | <LOQ | PASS |



Microbial Impurities Analysis

PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbial impurities.

Method: QSP 1221 - Analysis of Microbial Impurities

MICROBIAL IMPURITIES TEST RESULTS (PCR) - 11/20/2020 ✔ PASS

| COMPOUND | ACTION LIMIT | RESULT | RESULT |
|---|--------------|--------|--------|
| Shiga toxin-producing <i>Escherichia coli</i> | Detect | ND | PASS |
| <i>Salmonella</i> spp. | Detect | ND | PASS |
| <i>Aspergillus fumigatus</i> | Detect | ND | PASS |
| <i>Aspergillus flavus</i> | Detect | ND | PASS |
| <i>Aspergillus niger</i> | Detect | ND | PASS |
| <i>Aspergillus terreus</i> | Detect | ND | PASS |

Analysis conducted by 3M™ Petrifilm™ and plate counts of microbial impurities.

Method: QSP 6794 - Plating with 3M™ Petrifilm™

MICROBIAL IMPURITIES TEST RESULTS (PLATING)

| COMPOUND | RESULT (cfu/g) |
|----------------------|----------------|
| Aerobic Plate Count | NT |
| Total Yeast and Mold | NT |





Foreign Material Analysis

Visual analysis includes, but is not limited to, sand, soil, cinders, dirt, mold, hair, insect fragments, and mammalian excreta.

Method: QSP 1226 - Analysis of Foreign Material in Cannabis and Cannabis Products

FOREIGN MATERIAL TEST RESULTS - 11/20/2020 ✔ PASS

| COMPOUND | ACTION LIMIT | RESULT |
|---|-----------------|--------|
| Total Sample Area Covered by Sand, Soil, Cinders, or Dirt | >25% | PASS |
| Total Sample Area Covered by Mold | >25% | PASS |
| Total Sample Area Covered by an Imbedded Foreign Material | >25% | PASS |
| Insect Fragment Count | > 1 per 3 grams | PASS |
| Hair Count | > 1 per 3 grams | PASS |
| Mammalian Excreta Count | > 1 per 3 grams | PASS |



Water Activity Analysis

Method: QSP 1227 - Analysis of Water Activity in Cannabis and Cannabis Products

WATER ACTIVITY TEST RESULTS - 11/19/2020 ✔ PASS

| COMPOUND | ACTION LIMIT (Aw) | MEASUREMENT UNCERTAINTY (Aw) | RESULT (Aw) | RESULT |
|----------------|-------------------|------------------------------|-------------|--------|
| Water Activity | 0.65 | ±0.00381 | 0.5523 | PASS |

NOTES

COA amended to reflect requested assays.

