

SAMPLE NAME: Hope OG - Flower

Flower, Inhalable

CULTIVATOR / MANUFACTURER
Business Name: Royal Key LLC

License Number: C12-0000170-LIC

Address: 4701 West End RD
ARCATA, CA 95521

DISTRIBUTOR
Business Name: Royal Key LLC

License Number: C12-0000170-LIC

Address: 4701 West End RD
ARCATA, CA 95521

SAMPLE DETAIL
Batch Number: OBG - 08/11/22-2-C

Sample ID: 220919L001

Source Metrc UID:
1A40603000061B5000009527

Date Collected: 09/19/2022

Date Received: 09/20/2022

Batch Size: 2564.0 grams

Sample Size: 14.43 grams

Unit Mass:
Serving Size:
Sampling Method: QSP 1265 - Sampling of Cannabis and Product Batches


Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

CALCULATED USING DRY-WEIGHT

Sum of Cannabinoids: 20.63%
Total Cannabinoids: 18.22%
Total THC: 17.76%
Total CBD: 0.047%

Sum of Cannabinoids = Δ^9 -THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ^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) + Δ^8 -THC + CBL + CBN
 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 = Δ^9 -THC + (THCa (0.877))
 Total CBD = CBD + (CBDa (0.877))

Moisture: 10.7%

TERPENOID ANALYSIS - SUMMARY

39 TESTED, TOP 3 HIGHLIGHTED

Total Terpenoids: 1.7736%

β-Caryophyllene 5.063 mg/g

Limonene 4.049 mg/g

Linalool 1.758 mg/g

SAFETY ANALYSIS - SUMMARY
Pesticides: ✓ PASS
Mycotoxins: ✓ PASS
Heavy Metals: ✓ PASS
Microbiology: ✓ PASS
Foreign Material: ✓ PASS
Water Activity: ✓ PASS

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)

Callie Stone *Josh Wurzer*
 All LQC samples were performed and met the prescribed acceptance criteria in 4 CCR section 1730, as attested by:
 Callie Stone
 Date: 09/22/2022
 Approved by: Josh Wurzer, President
 Date: 09/22/2022


CANNABINOID TEST RESULTS - 09/22/2022

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 CANNABINOIDS: 18.22%

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ⁹-THC + CBL + CBN

TOTAL THC: 17.76%

Total THC (Δ⁹-THC+0.877*THCa)

TOTAL CBD: 0.047%

Total CBD (CBD+0.877*CBDA)

TOTAL CBG: 0.25%

Total CBG (CBG+0.877*CBGa)

TOTAL THCV: 0.038%

Total THCV (THCV+0.877*THCVa)

TOTAL CBC: 0.13%

Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: ND

Total CBDV (CBDV+0.877*CBDVa)

| COMPOUND | LOD/LOQ (mg/g) | MEASUREMENT UNCERTAINTY (mg/g) | RESULT (mg/g) | RESULT (%) |
|----------------------------|----------------|--------------------------------|---------------|------------|
| THCa | 0.04 / 0.24 | ±6.101 | 190.07 | 19.007 |
| Δ ⁹ -THC | 0.1 / 0.4 | ±0.33 | 10.9 | 1.09 |
| CBGa | 0.1 / 0.4 | ±0.16 | 2.9 | 0.29 |
| CBCa | 0.1 / 0.4 | ±0.10 | 1.5 | 0.15 |
| CBDA | 0.06 / 0.22 | ±0.018 | 0.54 | 0.054 |
| THCVa | 0.05 / 0.17 | ±0.010 | 0.43 | 0.043 |
| Δ ⁸ -THC | 0.05 / 0.50 | N/A | ND | ND |
| THCV | 0.07 / 0.21 | 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 |
| CBG | 0.2 / 0.5 | N/A | ND | ND |
| CBL | 0.1 / 0.4 | N/A | ND | ND |
| CBN | 0.07 / 0.20 | N/A | ND | ND |
| CBC | 0.1 / 0.2 | N/A | ND | ND |
| SUM OF CANNABINOIDS | | | 206.3 mg/g | 20.63% |

MOISTURE TEST RESULT
10.7%

Tested 09/21/2022

Method: QSP 1224 -

Loss on Drying (Moisture)

TERPENOID TEST RESULTS - 09/22/2022

Terpene analysis utilizing gas chromatography-flame ionization detection (GC-FID). **Method:** QSP 1192 - Analysis of Terpenoids by GC-FID

| COMPOUND | LOD/LOQ (mg/g) | MEASUREMENT UNCERTAINTY (mg/g) | RESULT (mg/g) | RESULT (%) |
|-----------------|----------------|--------------------------------|---------------|------------|
| β-Caryophyllene | 0.004 / 0.013 | ±0.2724 | 5.063 | 0.5063 |
| Limonene | 0.005 / 0.016 | ±0.1320 | 4.049 | 0.4049 |
| Linalool | 0.009 / 0.030 | ±0.0691 | 1.758 | 0.1758 |
| Myrcene | 0.007 / 0.025 | ±0.0575 | 1.623 | 0.1623 |
| α-Humulene | 0.009 / 0.031 | ±0.0814 | 1.513 | 0.1513 |
| Fenchol | 0.009 / 0.029 | ±0.0237 | 0.645 | 0.0645 |
| Terpineol | 0.008 / 0.025 | ±0.0357 | 0.584 | 0.0584 |

TERPENOID TEST RESULTS - 09/22/2022 continued

| COMPOUND | LOD/LOQ (mg/g) | MEASUREMENT UNCERTAINTY (mg/g) | RESULT (mg/g) | RESULT (%) |
|-------------------------|----------------|--------------------------------|---------------|------------|
| α-Bisabolol | 0.008 / 0.026 | ±0.0241 | 0.560 | 0.0560 |
| β-Pinene | 0.004 / 0.015 | ±0.0174 | 0.540 | 0.0540 |
| Nerolidol | 0.006 / 0.020 | ±0.0332 | 0.420 | 0.0420 |
| α-Pinene | 0.005 / 0.015 | ±0.0101 | 0.283 | 0.0283 |
| β-Ocimene | 0.005 / 0.018 | ±0.0088 | 0.224 | 0.0224 |
| trans-β-Farnesene | 0.008 / 0.028 | ±0.0101 | 0.177 | 0.0177 |
| Borneol | 0.004 / 0.014 | ±0.0063 | 0.135 | 0.0135 |
| Caryophyllene Oxide | 0.011 / 0.038 | ±0.0039 | 0.066 | 0.0066 |
| Camphene | 0.004 / 0.014 | ±0.0020 | 0.063 | 0.0063 |
| Fenchone | 0.008 / 0.026 | ±0.0012 | 0.033 | 0.0033 |
| Sabinene Hydrate | 0.007 / 0.022 | N/A | <LOQ | <LOQ |
| Terpinolene | 0.008 / 0.027 | N/A | <LOQ | <LOQ |
| Nerol | 0.003 / 0.011 | N/A | <LOQ | <LOQ |
| Sabinene | 0.004 / 0.014 | N/A | ND | ND |
| α-Phellandrene | 0.006 / 0.019 | N/A | ND | ND |
| Δ 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 |
| γ-Terpinene | 0.005 / 0.018 | 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 |
| Citronellol | 0.003 / 0.010 | N/A | ND | ND |
| 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 |
| Valencene | 0.010 / 0.033 | N/A | ND | ND |
| Guaiol | 0.011 / 0.035 | N/A | ND | ND |
| Cedrol | 0.009 / 0.032 | N/A | ND | ND |
| TOTAL TERPENOIDS | | | 17.736 mg/g | 1.7736% |


CATEGORY 1 PESTICIDE TEST RESULTS - 09/22/2022 ✔ 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

| COMPOUND | LOD/LOQ (µg/g) | ACTION LIMIT (µg/g) | MEASUREMENT UNCERTAINTY (µg/g) | RESULT (µg/g) | RESULT |
|-------------------|----------------|---------------------|--------------------------------|---------------|--------|
| Aldicarb | 0.03 / 0.08 | ≥ LOD | N/A | ND | PASS |
| Carbofuran | 0.02 / 0.05 | ≥ 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 / 0.07 | ≥ LOD | N/A | ND | PASS |
| Daminozide | 0.02 / 0.07 | ≥ LOD | N/A | ND | PASS |
| Dichlorvos (DDVP) | 0.03 / 0.09 | ≥ LOD | N/A | ND | PASS |
| Dimethoate | 0.03 / 0.08 | ≥ LOD | N/A | ND | PASS |
| Ethoprophos | 0.03 / 0.10 | ≥ LOD | N/A | ND | PASS |
| Etofenprox | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Fenoxycarb | 0.03 / 0.08 | ≥ LOD | N/A | ND | PASS |
| Fipronil | 0.03 / 0.08 | ≥ LOD | N/A | ND | PASS |
| Imazalil | 0.02 / 0.06 | ≥ LOD | N/A | ND | PASS |
| Methiocarb | 0.02 / 0.07 | ≥ LOD | N/A | ND | PASS |
| Parathion-methyl | 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 | 0.03 / 0.09 | ≥ LOD | N/A | ND | PASS |
| Spiroxamine | 0.03 / 0.08 | ≥ LOD | N/A | ND | PASS |
| Thiacloprid | 0.03 / 0.10 | ≥ LOD | N/A | ND | PASS |

CATEGORY 2 PESTICIDE TEST RESULTS - 09/22/2022 ✔ PASS

| COMPOUND | LOD/LOQ (µg/g) | ACTION LIMIT (µg/g) | MEASUREMENT UNCERTAINTY (µg/g) | RESULT (µg/g) | RESULT |
|---------------------|----------------|---------------------|--------------------------------|---------------|--------|
| Abamectin | 0.03 / 0.10 | 0.1 | N/A | ND | PASS |
| Acephate | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Acequinocyl | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Acetamiprid | 0.02 / 0.05 | 0.1 | N/A | ND | PASS |
| Azoxystrobin | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Bifenazate | 0.01 / 0.04 | 0.1 | N/A | ND | PASS |
| Bifenthrin | 0.02 / 0.05 | 3 | N/A | ND | PASS |
| Boscalid | 0.03 / 0.09 | 0.1 | N/A | ND | PASS |
| Captan | 0.19 / 0.57 | 0.7 | N/A | ND | PASS |
| Carbaryl | 0.02 / 0.06 | 0.5 | N/A | ND | PASS |
| Chlorantraniliprole | 0.04 / 0.12 | 10 | N/A | ND | PASS |
| Clofentezine | 0.03 / 0.09 | 0.1 | N/A | ND | PASS |

CATEGORY 2 PESTICIDE TEST RESULTS - 09/22/2022 *continued*

| COMPOUND | LOD/LOQ (µg/g) | ACTION LIMIT (µg/g) | MEASUREMENT UNCERTAINTY (µg/g) | RESULT (µg/g) | RESULT |
|--------------------------|----------------|---------------------|--------------------------------|---------------|--------|
| Cyfluthrin | 0.12 / 0.38 | 2 | N/A | ND | PASS |
| Cypermethrin | 0.11 / 0.32 | 1 | N/A | ND | PASS |
| Diazinon | 0.02 / 0.05 | 0.1 | N/A | ND | PASS |
| Dimethomorph | 0.03 / 0.09 | 2 | N/A | ND | PASS |
| Etoazale | 0.02 / 0.06 | 0.1 | N/A | ND | PASS |
| Fenhexamid | 0.03 / 0.09 | 0.1 | N/A | ND | PASS |
| Fenpyroximate | 0.02 / 0.06 | 0.1 | N/A | ND | PASS |
| Flonicamid | 0.03 / 0.10 | 0.1 | N/A | ND | PASS |
| Fludioxonil | 0.03 / 0.10 | 0.1 | N/A | ND | PASS |
| Hexythiazox | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Imidacloprid | 0.04 / 0.11 | 5 | N/A | ND | PASS |
| Kresoxim-methyl | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Malathion | 0.03 / 0.09 | 0.5 | N/A | ND | PASS |
| Metalaxyl | 0.02 / 0.07 | 2 | N/A | ND | PASS |
| Methomyl | 0.03 / 0.10 | 1 | N/A | ND | PASS |
| Myclobutanil | 0.03 / 0.09 | 0.1 | N/A | ND | PASS |
| Naled | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Oxamyl | 0.04 / 0.11 | 0.5 | N/A | ND | PASS |
| Pentachloronitrobenzene* | 0.03 / 0.09 | 0.1 | N/A | ND | PASS |
| Permethrin | 0.04 / 0.12 | 0.5 | N/A | ND | PASS |
| Phosmet | 0.03 / 0.10 | 0.1 | N/A | ND | PASS |
| Piperonyl Butoxide | 0.02 / 0.07 | 3 | N/A | ND | PASS |
| Prallethrin | 0.03 / 0.08 | 0.1 | N/A | ND | PASS |
| Propiconazole | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Pyrethrins | 0.04 / 0.12 | 0.5 | N/A | ND | PASS |
| Pyridaben | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Spinetoram | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Spinosad | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Spiromesifen | 0.02 / 0.05 | 0.1 | N/A | ND | PASS |
| Spirotetramat | 0.02 / 0.06 | 0.1 | N/A | ND | PASS |
| Tebuconazole | 0.02 / 0.07 | 0.1 | N/A | ND | PASS |
| Thiamethoxam | 0.03 / 0.10 | 5 | N/A | ND | PASS |
| Trifloxystrobin | 0.03 / 0.08 | 0.1 | N/A | ND | PASS |


MYCOTOXIN TEST RESULTS - 09/22/2022 ✔ PASS

Mycotoxin analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS). **Method:** QSP 1212 - Analysis of Pesticides and Mycotoxins by LC-MS

| 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 |

FOREIGN MATERIAL TEST RESULTS - 09/20/2022 ✔ PASS

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

| 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 |

HEAVY METALS TEST RESULTS - 09/22/2022 ✔ 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 | 0.2 | ±0.00 | 0.1 | PASS |
| Cadmium | 0.02 / 0.05 | 0.2 | ±0.006 | 0.07 | PASS |
| Lead | 0.04 / 0.1 | 0.5 | N/A | ND | PASS |
| Mercury | 0.002 / 0.01 | 0.1 | N/A | ND | PASS |

WATER ACTIVITY TEST RESULTS - 09/21/2022 ✔ PASS

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

| COMPOUND | ACTION LIMIT (Aw) | MEASUREMENT UNCERTAINTY (Aw) | RESULT (Aw) | RESULT |
|----------------|-------------------|------------------------------|-------------|--------|
| Water Activity | 0.65 | ±0.00357 | 0.5168 | PASS |

MICROBIOLOGY TEST RESULTS - 09/22/2022 ✔ PASS

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbiological contaminants. **Method:** QSP 1221 - Analysis of Microbiological Contaminants

| COMPOUND | ACTION LIMIT | RESULT | RESULT |
|---|--------------------|--------|--------|
| Shiga toxin-producing <i>Escherichia coli</i> | Not Detected in 1g | ND | PASS |
| <i>Salmonella</i> spp. | Not Detected in 1g | ND | PASS |
| <i>Aspergillus fumigatus</i> | Not Detected in 1g | ND | PASS |
| <i>Aspergillus flavus</i> | Not Detected in 1g | ND | PASS |
| <i>Aspergillus niger</i> | Not Detected in 1g | ND | PASS |
| <i>Aspergillus terreus</i> | Not Detected in 1g | ND | PASS |