

COMMONWEALTH
EXTRACTS
6900 RIVERPORT DR. SUITE
D
LOUISVILLE, KY 40258

Certificate of Analysis

ACS LABORATORY
CERTIFIED
CANNABIS & CBD
TESTED SAFE
acslabcannabis.com



Order #: COM200117-010189 Order Date: 2020-01-17 Collection Date: 2020-01-20 Report Date: 2020-01-23

Batch #: KC09251901-06
Sample #: AAAB380
Specimen Type: CBD/HEMP Derivative Products
Extracted From: Hemp
Description: V3 Crude Extract

Initial Gross Weight: 23950mg
Method: SOP-3



| | | |
|-----------------------------|------------------------------------|--|
| Potency Tested | Residual Solvents Passed | Heavy Metals Passed |
| Mycotoxins Passed | Pathogenic Passed | Pathogenic Microbiology Passed |
| Terpenes Tested | Pesticides Passed | |




The photos on this report are of a sample collected by the lab and may vary from the final packaging.


| | | |
|----------------------------------|-------------------------------------|--------------------------------------|
| CBD Total 44.242% | THC Total Not Detected | CBG Total 0.392% |
| CBN Total Not Detected | Other Cannabinoids 0.179% | Total Cannabinoids 44.813% |

Potency - 11 (Tested) (HPLC)

| Analyte | Result (mg/g) | (%) | LOQ (%) | Analyte | Result (mg/g) | (%) | LOQ (%) | Analyte | Result (mg/g) | (%) | LOQ (%) |
|------------------|---------------|-----|---------|-------------|---------------|--------|---------|------------------|---------------|--------|---------|
| CBC | <LOQ | | 0.001 | CBD | 208.700 | 20.870 | 0.001 | CBDA | 266.500 | 26.650 | 0.001 |
| CBDV | <LOQ | | 0.001 | CBG | 3.916 | 0.392 | 0.001 | CBGA | <LOQ | | 0.001 |
| CBN | <LOQ | | 0.001 | Delta-8-THC | <LOQ | | 0.001 | Delta-9-THC | <LOQ | | 0.001 |
| THCA-A | <LOQ | | 0.001 | THCV | 1.794 | 0.179 | 0.001 | Total CBD | 442.421 | 44.242 | 0.001 |
| Total THC | <LOQ | | 0.001 | | | | | | | | |

*Total CBD = CBD + (CBD-A * 0.877), *Total THC = THCA-A * 0.877 + Delta 9 THC, *CBG Total = (CBGA * 0.877) + CBG, *CBN Total = (CBNA * 0.877) + CBN, *Other Cannabinoids Total = CBC + CBDV + THC + THCV + THCV-A, *Total Detected Cannabinoids = CBD Total + CBG Total + CBN Total + THC Total + CBC + CBDV + THCV + THCV-A (mg/g) = Milligram per Gram, LOQ = Limit of Quantitation


Xueli Gao Lab Toxicologist
Ph.D., DABT


Aixia Sun Principal Scientist
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Method: SOP-3



Residual Solvents (Extract Only) (Passed)

(GC/GCMS)

| Analyte | Action Level (ppm) | Result (ppm) | LOQ (ppm) | Analyte | Action Level (ppm) | Result (ppm) | LOQ (ppm) | Analyte | Action Level (ppm) | Result (ppm) | LOQ (ppm) |
|-------------|--------------------|--------------|-----------|----------|--------------------|--------------|-----------|------------|--------------------|--------------|-----------|
| Acetone | 5000 | Passed | 87.9 | Benzene | 1.6 | <LOQ | 1.6 | Chloroform | 53 | <LOQ | 53 |
| Ethanol | 5000 | <LOQ | 26.7 | Hexane | 60 | <LOQ | 36.6 | I-Butane | 5000 | <LOQ | 100 |
| Isopropanol | 5000 | <LOQ | 52.3 | Methanol | 3000 | <LOQ | 87.9 | N-Butane | 5000 | <LOQ | 200 |
| Pentane | 5000 | <LOQ | 389.5 | Toluene | 890 | <LOQ | 38.4 | | | | |

(ppm) = Parts per Million, (ppm) = (µg/g), , LOQ = Limit of Quantitation

Heavy Metals (Passed)

(ICP-MS)

| Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) | Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) | Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) |
|--------------|--------------------|--------------|-----------|--------------|--------------------|--------------|-----------|-----------|--------------------|--------------|-----------|
| Arsenic (As) | 1500 | <LOQ | 100 | Cadmium (Cd) | 500 | <LOQ | 100 | Lead (Pb) | 500 | <LOQ | 100 |
| Mercury (Hg) | 3000 | <LOQ | 100 | | | | | | | | |

(ppb) = Parts per Billion, (ppb) = (µg/kg), , LOQ = Limit of Quantitation

Mycotoxins (Passed)

(LCMS/MS)

| Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) | Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) | Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) |
|--------------|--------------------|--------------|-----------|-----------------|--------------------|--------------|-----------|--------------|--------------------|--------------|-----------|
| Aflatoxin B1 | | <LOQ | 6 | Aflatoxin B2 | | <LOQ | 6 | Aflatoxin G1 | | <LOQ | 6 |
| Aflatoxin G2 | | <LOQ | 6 | Aflatoxin Total | 20 | <LOQ | 6 | Ochratoxin A | 20 | <LOQ | 12 |

(ppb) = Parts per Billion, (ppb) = (µg/kg), , LOQ = Limit of Quantitation

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Initial Gross Weight: 23950mg
Method: SOP-3



Pathogenic Microbiology #3 (HEMP Compliance Panel) (Passed) (qPCR)

| Analyte | Result |
|----------|---------|
| Listeria | Absence |

Pathogenic Microbiology #1 (MMTC Compliance Panel) (Passed) (Micro Array)

| Analyte | Result | Analyte | Result | Analyte | Result |
|--------------------|---------|-----------------------|---------|---------------------|---------|
| Aspergillus flavus | Absence | Aspergillus fumigatus | Absence | Aspergillus niger | Absence |
| Salmonella | Absence | STEC E. Coli | Absence | Aspergillus terreus | Absence |

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Terpenes - FL (Tested)

(GC/GCMS)

| Analyte | Result (mg/g) | (%) | LOQ (%) | Analyte | Result (mg/g) | (%) | LOQ (%) | Analyte | Result (mg/g) | (%) | LOQ (%) |
|---------------------|---------------|-------|---------|---------------------|---------------|-------|---------|-----------------|---------------|-------|---------|
| (+)-Cedrol | | <LOQ | 0.001 | (R)-(+)-Limonene | | <LOQ | 0.001 | 3-Carene | | <LOQ | 0.001 |
| Alpha-Bisabolol | 3.730 | 0.373 | 0.001 | alpha-Cedrene | | <LOQ | 0.001 | alpha-Humulene | 2.600 | 0.260 | 0.001 |
| alpha-Phellandrene | | <LOQ | 0.001 | alpha-Pinene | | <LOQ | 0.001 | alpha-Terpinene | | <LOQ | 0.001 |
| Borneol | | <LOQ | 0.001 | beta-Myrcene | | <LOQ | 0.001 | beta-Pinene | | <LOQ | 0.001 |
| Caryophyllene oxide | 3.110 | 0.311 | 0.001 | Camphene | | <LOQ | 0.001 | Camphors | | <LOQ | 0.001 |
| Fenchyl Alcohol | | <LOQ | 0.001 | cis-Nerolidol | | <LOQ | 0.001 | Eucalyptol | | <LOQ | 0.001 |
| Guaiol | 2.220 | 0.222 | 0.001 | Farnesene | | <LOQ | 0.001 | Fenchone | | <LOQ | 0.001 |
| Isopulegol | | <LOQ | 0.001 | gamma-Terpinene | | <LOQ | 0.001 | Geraniol | | <LOQ | 0.001 |
| Ocimene | | <LOQ | 0.001 | Hexahydrothymol | | <LOQ | 0.001 | Geranyl acetate | | <LOQ | 0.001 |
| Sabinene Hydrate | | <LOQ | 0.001 | Linalool | | <LOQ | 0.001 | Isoborneol | | <LOQ | 0.001 |
| trans-beta-Ocimene | | <LOQ | 0.001 | Pulegone | | <LOQ | 0.001 | Nerol | | <LOQ | 0.001 |
| | | | | Terpineol | | <LOQ | 0.001 | Sabinene | | <LOQ | 0.001 |
| | | | | trans-Caryophyllene | 5.200 | 0.520 | 0.001 | Terpinolene | | <LOQ | 0.001 |
| | | | | | | | | trans-Nerolidol | | <LOQ | 0.001 |
| | | | | | | | | Valencene | | <LOQ | 0.001 |

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Sample #: AAAB380 Method: SOP-3
Specimen Type: CBD/HEMP Derivative Products
Extracted From: Hemp
Description: V3 Crude Extract



Pesticides (Passed) (LCMS/MS)

| Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) | Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) | Analyte | Action Level (ppb) | Result (ppb) | LOQ (ppb) |
|------------------|--------------------|--------------|-----------|------------------|--------------------|--------------|-----------|-------------------------|--------------------|--------------|-----------|
| Abamectin | 300 | <LOQ | 28.23 | Acephate | 3000 | <LOQ | 30 | Acequinocyl | 2000 | <LOQ | 48 |
| Acetamiprid | 3000 | <LOQ | 30 | Aldicarb | 100 | <LOQ | 30 | Azoxystrobin | 3000 | <LOQ | 10 |
| Bifenazate | 3000 | <LOQ | 30 | Bifenthrin | 500 | <LOQ | 30 | Chlorfenapyr | 100 | <LOQ | 48 |
| Chlorpyrifos | 100 | <LOQ | 30 | Clofentezine | 500 | <LOQ | 30 | Coumaphos | 100 | <LOQ | 30 |
| Cyfluthrin | 1000 | <LOQ | 30 | Cypermethrin | 1000 | <LOQ | 30 | Daminozide | 100 | <LOQ | 30 |
| DDVP(Dichlorvos) | 100 | <LOQ | 30 | Diazinon | 200 | <LOQ | 30 | Dimethoate | 100 | <LOQ | 30 |
| Dimethomorph | 3000 | <LOQ | 30 | Ethoprop(hos) | 100 | <LOQ | 30 | Etofenprox | 100 | <LOQ | 30 |
| Etoxazole | 1500 | <LOQ | 30 | Fenhexamid | 3000 | <LOQ | 30 | Fenoxycarb | 100 | <LOQ | 30 |
| Fipronil | 100 | <LOQ | 30 | Flonicamid | 2000 | <LOQ | 30 | Fludioxonil | 3000 | <LOQ | 30 |
| Hexythiazox | 2000 | <LOQ | 30 | Imazalil | 100 | <LOQ | 30 | Imidacloprid | 3000 | <LOQ | 30 |
| Kresoxim Methyl | 1000 | <LOQ | 30 | Malathion A | 2000 | <LOQ | 30 | Metalaxyl | 3000 | <LOQ | 10 |
| Methiocarb | 100 | <LOQ | 30 | Methomyl | 100 | <LOQ | 30 | Mevinphos | 100 | <LOQ | 30 |
| Myclobutanil | 3000 | <LOQ | 30 | Naled | 500 | <LOQ | 30 | Oxamyl | 500 | <LOQ | 30 |
| Paclobutrazol | 100 | <LOQ | 30 | Parathion-methyl | 100 | <LOQ | 48 | Pentachloronitrobenzene | 200 | <LOQ | 30 |
| Permethrin | 1000 | <LOQ | 30 | Phosmet | 200 | <LOQ | 30 | Piperonylbutoxide | 3000 | <LOQ | 30 |
| Prallethrin | 400 | <LOQ | 30 | Propiconazole | 1000 | <LOQ | 30 | Propoxur | 100 | <LOQ | 30 |
| Pyrethrins | 1000 | <LOQ | 30 | Pyridaben | 3000 | <LOQ | 30 | Spinetoram | 3000 | <LOQ | 30 |
| Spinosyn A | 3000 | <LOQ | 30 | Spinosyn D | 3000 | <LOQ | 30 | Spiromesifen | 3000 | <LOQ | 30 |
| Spirotetramat | 3000 | <LOQ | 30 | Spiroxamine | 100 | <LOQ | 30 | Tebuconazole | 1000 | <LOQ | 30 |
| Thiacloprid | 100 | <LOQ | 30 | Thiamethoxam | 1000 | <LOQ | 30 | Trifloxystrobin | 3000 | <LOQ | 30 |

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