

Order #: 36480 Order Name: CBD Isolate Batch#: 091901-09 Received: 09/17/2019 Completed: 10/01/2019



Crystal Creek Organics 652 Capital Circle NE Suite A Tallahassee FL, 32301 (850) 815-0781 ryan@crystalcreekorganics.com



#### Sample



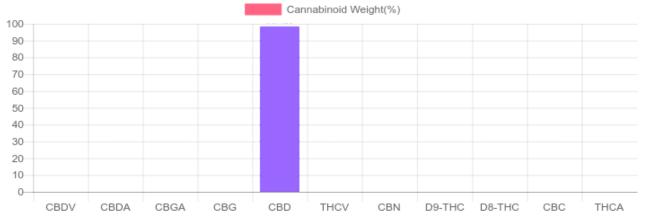
N/D D9-THC 98.426% Total CBD

#### Cannabinoids Test

SHIMADZU INTEGRATED UPLC-PDA

GSL SOP 400 PREPARED: 09/18/2019 20:57:09 UPLOADED: 09/19/2019 14:46:45

| Cannabinoids       | LOQ    | weight(%) | mg/g    |
|--------------------|--------|-----------|---------|
| D9-THC             | 10 PPM | N/D       | N/D     |
| THCA               | 10 PPM | N/D       | N/D     |
| CBD                | 10 PPM | 98.426%   | 984.264 |
| CBDA               | 20 PPM | N/D       | N/D     |
| CBDV               | 20 PPM | N/D       | N/D     |
| CBC                | 10 PPM | N/D       | N/D     |
| CBN                | 10 PPM | N/D       | N/D     |
| CBG                | 10 PPM | N/D       | N/D     |
| CBGA               | 20 PPM | N/D       | N/D     |
| D8-THC             | 10 PPM | N/D       | N/D     |
| THCV               | 10 PPM | N/D       | N/D     |
| TOTAL D9-THC       |        | N/D       | N/D     |
| TOTAL CBD*         |        | 98.426%   | 984.264 |
| TOTAL CANNABINOIDS |        | 98.426%   | 984.264 |



Reporting Limit 10 ppm

\*Total CBD = CBD + CBDA x 0.877

N/D - Not Detected, B/LOQ - Below Limit of Quantification



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### **PESTICIDE ANALYSIS:**

GSL SOP 401 PREPARED: 09/27/2019 23:01:12 UPLOADED: 09/30/2019 20:39:11

GCMS-MS - Shimadzu GCMS-TQ8040

| Pesticide    | Action Level (ppm) | Results (ppm) | LOQ<br>(ppm) | LOD<br>(ppm) |
|--------------|--------------------|---------------|--------------|--------------|
| CAPTAN       | 0.700              | N/D           | 0.003        | 0.001        |
| CHLORDANE    | 0.100              | N/D           | 0.003        | 0.001        |
| CHLORFENAPYR | 0.100              | N/D           | 0.003        | 0.001        |
| COUMAPHOS    | 0.100              | N/D           | 0.003        | 0.001        |

| Pesticide              | Action Level | LOQ   | LOD   |       |
|------------------------|--------------|-------|-------|-------|
| resticide              | (ppm)        | (ppm) | (ppm) | (ppm) |
| CYFLUTHRIN             | 2.000        | N/D   | 0.003 | 0.001 |
| CYPERMETHRIN           | 1.000        | N/D   | 0.003 | 0.001 |
| PARATHION-METHYL       | 0.100        | N/D   | 0.003 | 0.001 |
| PENTACHLORONITROBENZEN | 0.100        | N/D   | 0.003 | 0.001 |

LCMS-MS - Shimadzu LCMS-8060

| Pesticide           | Action Level (ppm) | Results (ppm) | LOQ<br>(ppm) | LOD<br>(ppm) | Pesticide       | Action Level (ppm) | Results (ppm) | LOQ<br>(ppm) | LOD<br>(ppm) |
|---------------------|--------------------|---------------|--------------|--------------|-----------------|--------------------|---------------|--------------|--------------|
| ABAMECTIN B1A       | 0.100              | N/D           | 0.005        | 0.001        | IMAZALIL        | 0.100              | N/D           | 0.005        | 0.001        |
| ACEPHATE            | 0.100              | N/D           | 0.001        | 0.001        | IMIDACLOPRID    | 5.000              | N/D           | 0.005        | 0.001        |
| ACEQUINOCYL         | 0.100              | N/D           | 0.001        | 0.001        | KRESOXIM-METHYL | 0.100              | N/D           | 0.010        | 0.005        |
| ACETAMIPRID         | 0.100              | N/D           | 0.005        | 0.001        | MALATHION       | 0.500              | N/D           | 0.005        | 0.001        |
| ALDICARB            | 0.100              | N/D           | 0.005        | 0.001        | METALAXYL       | 2.000              | N/D           | 0.001        | 0.001        |
| AZOXYSTROBIN        | 0.100              | N/D           | 0.001        | 0.001        | METHIOCARB      | 0.100              | N/D           | 0.005        | 0.001        |
| BIFENAZATE          | 0.100              | N/D           | 0.005        | 0.001        | METHOMYL        | 1.000              | N/D           | 0.001        | 0.001        |
| BIFENTHRIN          | 3.000              | N/D           | 0.005        | 0.001        | MEVINPHOS       | 0.100              | N/D           | 0.001        | 0.001        |
| BOSCALID            | 0.100              | N/D           | 0.005        | 0.001        | MYCLOBUTANIL    | 0.100              | N/D           | 0.005        | 0.001        |
| CARBARYL            | 0.500              | N/D           | 0.003        | 0.001        | NALED           | 0.100              | N/D           | 0.005        | 0.001        |
| CARBOFURAN          | 0.100              | N/D           | 0.001        | 0.001        | OXAMYL          | 0.500              | N/D           | 0.001        | 0.001        |
| CHLORANTRANILIPROLE | 10.000             | N/D           | 0.005        | 0.005        | PACLOBUTRAZOL   | 0.100              | N/D           | 0.005        | 0.001        |
| CHLORPYRIFOS        | 0.100              | N/D           | 0.001        | 0.001        | PERMETHRINS     | 0.500              | N/D           | 0.005        | 0.001        |
| CLOFENTEZINE        | 0.100              | N/D           | 0.001        | 0.001        | PHOSMET         | 0.100              | N/D           | 0.005        | 0.001        |
| DAMINOZIDE          | 0.100              | N/D           | 0.005        | 0.001        | PIPERONYL       | 0.000              | N/D           | 0.004        | 0.004        |
| DIAZANON            | 0.100              | N/D           | 0.001        | 0.001        | BUTOXIDE        | 3.000              | N/D           | 0.001        | 0.001        |
| DICHLORVOS          | 0.100              | N/D           | 0.005        | 0.001        | PRALLETHRIN     | 0.100              | N/D           | 0.005        | 0.005        |
| DIMETHOATE          | 0.100              | N/D           | 0.001        | 0.001        | PROPICONAZOLE   | 0.100              | N/D           | 0.010        | 0.005        |
| DIMETHOMORPH        | 2.000              | N/D           | 0.005        | 0.001        | PROPOXUR        | 0.100              | N/D           | 0.001        | 0.001        |
| ETHOPROPHOS         | 0.100              | N/D           | 0.001        | 0.001        | PYRETHRINS      | 0.500              | N/D           | 0.005        | 0.005        |
| ETOFENPROX          | 0.100              | N/D           | 0.001        | 0.001        | (PYRETHRIN I)   | 0.500              | N/D           | 0.005        | 0.005        |
| ETOXAZOLE           | 0.100              | N/D           | 0.010        | 0.005        | PYRIDABEN       | 0.100              | N/D           | 0.005        | 0.001        |
| FENHEXAMID          | 0.100              | N/D           | 0.005        | 0.001        | SPINETORAM      | 0.100              | N/D           | 0.001        | 0.001        |
| FENOXYCARB          | 0.100              | N/D           | 0.005        | 0.001        | SPINOSAD        | 0.100              | N/D           | 0.001        | 0.001        |
| FENPYROXIMATE       | 0.100              | N/D           | 0.001        | 0.001        | SPIROMESIFEN    | 0.100              | N/D           | 0.005        | 0.001        |
| FIPRONIL            | 0.100              | N/D           | 0.003        | 0.001        | SPIROTETRAMAT   | 0.100              | N/D           | 0.001        | 0.001        |
| FLONICAMID          | 0.100              | N/D           | 0.025        | 0.010        | SPIROXAMINE     | 0.100              | N/D           | 0.001        | 0.001        |
| FLUDIOXONIL         | 0.100              | N/D           | 0.003        | 0.001        | TEBUCONAZOLE    | 0.100              | N/D           | 0.005        | 0.001        |
| HEXYTHIAZOX         | 0.100              | N/D           | 0.005        | 0.001        | THIACLOPRID     | 0.100              | N/D           | 0.001        | 0.001        |
|                     |                    |               |              |              | THIAMETHOXAM    | 5.000              | N/D           | 0.001        | 0.001        |
|                     |                    |               |              |              | TRIFLOXYSTROBIN | 0.100              | N/D           | 0.001        | 0.001        |

N/D = Not Detected, A/LOQ = Above LOQ Level, B/LOQ = Below LOQ Level, B/LOD = Below LOD Level



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### **RESIDUAL SOLVENTS:**

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405 Prepared: 09/19/2019 22:02:27 Uploaded: 09/23/2019 15:51:53

| Residual Solvent  | Action Level (ppm) | Results (ppm) | LOQ (ppm) | LOD (ppm) |
|-------------------|--------------------|---------------|-----------|-----------|
| ACETONE           | 5,000              | N/D           | 140       | 20        |
| ACETONITRILE      | 410                | N/D           | 25        | 1         |
| BENZENE           | 1                  | N/D           | 1         | 0.5       |
| BUTANE            | 5,000              | N/D           | 50        | 10        |
| CHLOROFORM        | 1                  | N/D           | 1         | 0.5       |
| DICHLOROETHANE    | 1                  | N/D           | 1         | 0.5       |
| DICHLOROMETHANE   | 1                  | N/D           | 1         | 0.5       |
| ETHANOL           | 5,000              | N/D           | 140       | 20        |
| ETHYL ACETATE     | 5,000              | N/D           | 140       | 20        |
| ETHYL ETHER       | 5,000              | N/D           | 140       | 20        |
| ISOPROPYL ALCOHOL | 5,000              | N/D           | 140       | 20        |
| METHANOL          | 3,000              | N/D           | 100       | 20        |
| N-HEPTANE         | 5,000              | N/D           | 140       | 20        |
| N-HEXANE          | 290                | N/D           | 18        | 10        |
| PENTANE           | 5,000              | N/D           | 140       | 20        |
| PROPANE           | 5,000              | N/D           | 20        | 1         |
| TOLUENE           | 890                | N/D           | 53        | 1         |
| TRICHLOROETHENE   | 1                  | N/D           | 0         | 0         |
| XYLENES           | 2,170              | N/D           | 130       | 20        |













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### **Microbial Analysis:**

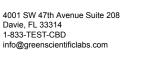
Microbial Analysis GSL SOP 406

Uploaded: 09/23/2019 19:41:15

| PCR - Agilent AriaMX <b>Test</b> | Test Method<br>Used | Device Used | LOD               | Allowable Criteria | Actual<br>Result   | Pass/Fail |
|----------------------------------|---------------------|-------------|-------------------|--------------------|--------------------|-----------|
| STEC E.COLI*                     | USP 61/62†          | ARIAMX PCR  | 2 COPIES OF DNA   | PRESENCE / ABSENT  | BELOW LOD          | PASS      |
| SALMONELLA*                      | USP 61/62†          | ARIAMX PCR  | 5 COPIES OF DNA   | PRESENCE / ABSENT  | BELOW LOD          | PASS      |
| ASPERGILLUS                      | USP 61/62†          | ARIAMX PCR  | ASP_LOD***        | PRESENCE / ABSENT  | BELOW LOD          | PASS      |
| YEAST AND MOLD                   | USP 61/62†          | ARIAMX PCR  | 363.05518 CFU/G** | 1,000              | BELOW<br>THRESHOLD | PASS      |
| TOTAL AEROBIC BACTERIA           | USP 61/62†          | ARIAMX PCR  | 0.25316 CFU/G**   | 10,000             | BELOW<br>THRESHOLD | PASS      |
| COLIFORM                         | USP 61/62†          | ARIAMX PCR  | 3.41539 CFU/G**   | 100                | BELOW<br>THRESHOLD | PASS      |
| ENTEROBACTERIACEAE               | USP 61/62†          | ARIAMX PCR  | 0.32951 CFU/G**   | 100                | BELOW<br>THRESHOLD | PASS      |

<sup>†</sup> USP 61 (enumeration of bacteria TAC, TYM, and ENT/Coliform), USP 62 (identifying specific species E.coli Aspergillus etc) \* STEC and Salmonella run as Multiplex













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<sup>\*\*</sup> CFU/g Calculation based on Select Category Type Gummy MIP/Extract Flower matrix

<sup>\*\*\*</sup> Flavus = 2 Copies of DNA / Furnigatis = 2 Copies of DNA Niger = 20 Copies of DNA / Terrus = 10 copies of DNA



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### **Mycotoxin Analysis:**

LC-MS - Shimadzu LCMS-8060 GSL SOP 401

Uploaded: 09/30/2019 20:39:11

| Analyte      | Action Lvl (ppb) | Results (ppb) |  |  |
|--------------|------------------|---------------|--|--|
| AFLATOXIN B1 | 20               | N/D           |  |  |
| AFLATOXIN B2 | 20               | N/D           |  |  |
| AFLATOXIN G1 | 20               | N/D           |  |  |
| AFLATOXIN G2 | 20               | N/D           |  |  |
| OCHRATOXIN A | 20               | N/D           |  |  |
|              |                  |               |  |  |

LOQ is 4ppb, LOD is 1ppb

### **Heavy Metals Analysis:**

ICP-MS - Shimadzu ICPMS-2030 GSL SOP 403

Uploaded: 09/25/2019 21:28:41

| Metal        | Action Level (ppb) | Result (ppb) |
|--------------|--------------------|--------------|
| ARSENIC (AS) | 200                | B/LOQ        |
| CADMIUM (CD) | 200                | B/LOQ        |
| MERCURY (HG) | 100                | B/LOQ        |
| LEAD (PB)    | 500                | B/LOQ        |

Lower Limit of Quantitation (LOQ) is 75 ppb



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