Steep Hill California
1005 PARKER STREET, BERKELEY, CA 94710
LICENSE #: C8-0000082-LIC

# CERTIFICATE OF ANALYSIS

Sample Name: 500mg CBD Lotion
Steep Hill ID: BK75446
Batch ID:
Sample Type: Topical
Date Received: 10/23/2019
Date Reported: 10/25/2019
Pkg. Mass: 61.5728 g
Density:

Customer: Cultivated Minds Innovation

**Cannabinoid Results – Standard Potency** **10/25/2019**

Standard potency analysis utilizing High Performance Liquid Chromatography with Photo Diode Array Detector (HPLC-PDA; SOP-068) - **THC Limits: 1000 mg/pkg**

| Analyte | % | mg/g | mg/pkg | LOD mg/g | LOQ mg/g |
|---|---|---|---|---|---|
| CBD | 0.91 | 9.1 | 560 | 0.0096 | 0.055 |
| CBDA | ND | ND | ND | 0.0031 | 0.028 |
| CBG | ND | ND | ND | 0.0041 | 0.028 |
| CBN | ND | ND | ND | 0.00105 | 0.028 |
| THC | ND | ND | ND | 0.0043 | 0.028 |
| THCA | ND | ND | ND | 0.0044 | 0.028 |
| Total | 0.91 | 9.1 | 560 | | |

| Total THC | Total CBD |
|---|---|
| Not Detected | 0.91 % |
| Not Detected | 9.1 mg/g |
| Not Detected | 560 mg/pkg |

**Cannabinoid Results – Extended Cannabinoids** NT

Standard potency analysis utilizing High Performance Liquid Chromatography with Photo Diode Array Detector (HPLC-PDA; SOP-068) - **THC Limits: 1000 mg/pkg**

| Analyte | % | mg/g | mg/pkg | LOD mg/g | LOQ mg/g |
|---|---|---|---|---|---|
| CBC | NT | NT | NT | NT | NT |
| CBCA | NT | NT | NT | NT | NT |
| CBD | NT | NT | NT | NT | NT |
| CBDA | NT | NT | NT | NT | NT |
| CBDV | NT | NT | NT | NT | NT |
| CBDVA | NT | NT | NT | NT | NT |
| CBG | NT | NT | NT | NT | NT |
| CBGA | NT | NT | NT | NT | NT |
| CBLA | NT | NT | NT | NT | NT |
| CBN | NT | NT | NT | NT | NT |
| CBNA | NT | NT | NT | NT | NT |
| THC | NT | NT | NT | NT | NT |
| Δ8-THC | NT | NT | NT | NT | NT |
| THCA | NT | NT | NT | NT | NT |
| THCV | NT | NT | NT | NT | NT |
| THCVA | NT | NT | NT | NT | NT |
| Total | NT | NT | NT | NT | NT |

LOD: Limit of Detection
LOQ: Limit of Quantitation
NT: Not Tested
ND: Not Detected

**Moisture Results** NT

Moisture content analysis utilizing Moisture Balance (MB; SOP-055)

| Analyte | % |
|---|---|
| Moisture | NT |

**Water Activity Results** NT

Water Activity analysis utilizing Water Activity Meter (WAM; SOP-090) - **Limit units: Aw**

| Analyte | Aw | Limit |
|---|---|---|
| Water Activity | NT | NT |

**Foreign Material Results** NT

Foreign material analysis utilizing visual inspection (SOP-057)

| Analyte | Pass/Fail |
|---|---|
| Visual Inspection | NT |

Travis Ruthenburg
Chief Science Officer
Date: 10/25/2019

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# CERTIFICATE OF ANALYSIS

**Residual Pesticides Results** NT

Residual pesticide analysis utilizing Liquid and Gas Chromatography – Mass Spectrometry (LC-MSMS + GC-MSMS; SOP-070 + SOP-080) - **Limit units: µg/g**

| Analyte | µg/g | Limit | LOD µg/g | LOQ µg/g | Analyte | µg/g | Limit | LOD µg/g | LOQ µg/g |
|---|---|---|---|---|---|---|---|---|---|
| Abamectin | NT | NT | NT | NT | Fludioxonil | NT | NT | NT | NT |
| Acephate | NT | NT | NT | NT | Hexythiazox | NT | NT | NT | NT |
| Acequinocyl | NT | NT | NT | NT | Imazalil | NT | NT | NT | NT |
| Acetamiprid | NT | NT | NT | NT | Imidacloprid | NT | NT | NT | NT |
| Aldicarb | NT | NT | NT | NT | Kresoxim-methyl | NT | NT | NT | NT |
| Azoxystrobin | NT | NT | NT | NT | Malathion | NT | NT | NT | NT |
| Bifenazate | NT | NT | NT | NT | Metalaxyl | NT | NT | NT | NT |
| Bifenthrin | NT | NT | NT | NT | Methiocarb | NT | NT | NT | NT |
| Boscalid | NT | NT | NT | NT | Methomyl | NT | NT | NT | NT |
| Captan | NT | NT | NT | NT | Methyl Parathion | NT | NT | NT | NT |
| Carbaryl | NT | NT | NT | NT | Mevinphos | NT | NT | NT | NT |
| Carbofuran | NT | NT | NT | NT | Myclobutanil | NT | NT | NT | NT |
| Chlorantraniliprole | NT | NT | NT | NT | Naled | NT | NT | NT | NT |
| Chlordane | NT | NT | NT | NT | Oxamyl | NT | NT | NT | NT |
| Chlorfenapyr | NT | NT | NT | NT | Paclobutrazol | NT | NT | NT | NT |
| Chlorpyrifos | NT | NT | NT | NT | Pentachloronitrobenzene | NT | NT | NT | NT |
| Clofentezine | NT | NT | NT | NT | Permethrin | NT | NT | NT | NT |
| Coumaphos | NT | NT | NT | NT | Phosmet | NT | NT | NT | NT |
| Cyfluthrin | NT | NT | NT | NT | Piperonyl Butoxide | NT | NT | NT | NT |
| Cypermethrin | NT | NT | NT | NT | Prallethrin | NT | NT | NT | NT |
| Daminozide | NT | NT | NT | NT | Propiconazole | NT | NT | NT | NT |
| Diazinon | NT | NT | NT | NT | Propoxur | NT | NT | NT | NT |
| Dichlorvos | NT | NT | NT | NT | Pyrethrins | NT | NT | NT | NT |
| Dimethoate | NT | NT | NT | NT | Pyridaben | NT | NT | NT | NT |
| Dimethomorph | NT | NT | NT | NT | Spinetoram | NT | NT | NT | NT |
| Ethoprophos | NT | NT | NT | NT | Spinosad | NT | NT | NT | NT |
| Etofenprox | NT | NT | NT | NT | Spiromesifen | NT | NT | NT | NT |
| Etoxazole | NT | NT | NT | NT | Spirotetramat | NT | NT | NT | NT |
| Fenhexamid | NT | NT | NT | NT | Spiroxamine | NT | NT | NT | NT |
| Fenoxycarb | NT | NT | NT | NT | Tebuconazole | NT | NT | NT | NT |
| Fenpyroximate | NT | NT | NT | NT | Thiacloprid | NT | NT | NT | NT |
| Fipronil | NT | NT | NT | NT | Thiamethoxam | NT | NT | NT | NT |
| Flonicamid | NT | NT | NT | NT | Trifloxystrobin | NT | NT | NT | NT |

**Residual Solvents Results** NT

Residual solvents and processing chemicals analysis utilizing Headspace Gas Chromatography – Mass Spectrometry (HS-GC-MS; SOP-010) - **Limit units: µg/g**

| Analyte | µg/g | Limit | LOD µg/g | LOQ µg/g | Analyte | µg/g | Limit | LOD µg/g | LOQ µg/g |
|---|---|---|---|---|---|---|---|---|---|
| 1,2 Dichloroethane | NT | NT | NT | NT | n-Heptane | NT | NT | NT | NT |
| Acetone | NT | NT | NT | NT | n-Hexane | NT | NT | NT | NT |
| Acetonitrile | NT | NT | NT | NT | Isopropanol | NT | NT | NT | NT |
| Benzene | NT | NT | NT | NT | Methanol | NT | NT | NT | NT |
| n-Butane | NT | NT | NT | NT | Methylene Chloride | NT | NT | NT | NT |
| Chloroform | NT | NT | NT | NT | n-Pentane | NT | NT | NT | NT |
| Ethanol | NT | NT | NT | NT | Propane | NT | NT | NT | NT |
| Ethyl Acetate | NT | NT | NT | NT | Toluene | NT | NT | NT | NT |
| Ethyl Ether | NT | NT | NT | NT | Total Xylenes | NT | NT | NT | NT |
| Ethylene Oxide | NT | NT | NT | NT | Trichloroethylene | NT | NT | NT | NT |

Travis Ruthenburg
Chief Science Officer
Date: 10/25/2019

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# CERTIFICATE OF ANALYSIS

**Microbial Impurities Results** NT

Microbiological screening utilizing Pathogen Dx. (PDX; SOP-076)

| Analyte | Result | Limit | LOQ |
|---|---|---|---|
| Aspergillus flavus | NT | NT | NT |
| Aspergillus fumigatus | NT | NT | NT |
| Aspergillus niger | NT | NT | NT |
| Aspergillus terreus | NT | NT | NT |
| E. coli (STEC) | NT | NT | NT |
| Salmonella | NT | NT | NT |

**Heavy Metals Results** NT

Heavy metals analysis utilizing Inductively Coupled Plasma Mass Spectrometry (ICP-MS; SOP-072) - **Limit units: µg/g**

| Analyte | µg/g | Limit | LOD µg/g | LOQ µg/g |
|---|---|---|---|---|
| Arsenic | NT | NT | NT | NT |
| Cadmium | NT | NT | NT | NT |
| Lead | NT | NT | NT | NT |
| Mercury | NT | NT | NT | NT |

**Mycotoxin Results** NT

Mycotoxin analysis utilizing Liquid Chromatography – Mass Spectrometry (LC-MSMS; SOP-070) - **Limit units: µg/kg**

| Analyte | µg/kg | Limit | LOD µg/kg | LOQ µg/kg |
|---|---|---|---|---|
| Aflatoxin B1 | NT | NT | NT | NT |
| Aflatoxin B2 | NT | NT | NT | NT |
| Aflatoxin G1 | NT | NT | NT | NT |
| Aflatoxin G2 | NT | NT | NT | NT |
| Ochratoxin A | NT | NT | NT | NT |
| Total Aflatoxins | NT | NT | NT | NT |

**Terpenoid Results - Standard Terpenes** NT

Standard terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS; SOP-069)

| Analyte | % | mg/g | LOD mg/g | LOQ mg/g |
|---|---|---|---|---|
| Caryophyllene Oxide | NT | NT | NT | NT |
| β-Caryophyllene | NT | NT | NT | NT |
| Citronellol | NT | NT | NT | NT |
| α-Humulene | NT | NT | NT | NT |
| Limonene | NT | NT | NT | NT |
| Linalool | NT | NT | NT | NT |
| β-Myrcene | NT | NT | NT | NT |
| Phytol 1 | NT | NT | NT | NT |
| Phytol 2 | NT | NT | NT | NT |
| α-Pinene | NT | NT | NT | NT |
| β-Pinene | NT | NT | NT | NT |
| Terpinolene | NT | NT | NT | NT |
| Total | NT | NT | NT | NT |

**Terpenoid Results - Extended Terpenes** NT

Extended terpene analysis utilizing Gas Chromatography – Mass Spectrometry (GC-MS; SOP-069)

| Analyte | % | mg/g | LOD mg/g | LOQ mg/g | Analyte | % | mg/g | LOD mg/g | LOQ mg/g |
|---|---|---|---|---|---|---|---|---|---|
| α-Bisabolol | NT | NT | NT | NT | Linalool | NT | NT | NT | NT |
| endo-Borneol | NT | NT | NT | NT | Menthol | NT | NT | NT | NT |
| Camphene | NT | NT | NT | NT | β-Myrcene | NT | NT | NT | NT |
| Camphor | NT | NT | NT | NT | Nerol | NT | NT | NT | NT |
| 3-Carene | NT | NT | NT | NT | cis-Nerolidol | NT | NT | NT | NT |
| Caryophyllene Oxide | NT | NT | NT | NT | trans-Nerolidol | NT | NT | NT | NT |
| β-Caryophyllene | NT | NT | NT | NT | cis-β-Ocimene | NT | NT | NT | NT |
| α-Cedrene | NT | NT | NT | NT | trans-β-Ocimene | NT | NT | NT | NT |
| Cedrol | NT | NT | NT | NT | α-Phellandrene | NT | NT | NT | NT |
| Citronellol | NT | NT | NT | NT | Phytol 1 | NT | NT | NT | NT |
| Eucalyptol | NT | NT | NT | NT | Phytol 2 | NT | NT | NT | NT |
| α-Farnesene | NT | NT | NT | NT | α-Pinene | NT | NT | NT | NT |
| β-Farnesene | NT | NT | NT | NT | β-Pinene | NT | NT | NT | NT |
| Fenchol | NT | NT | NT | NT | Pulegone | NT | NT | NT | NT |
| Fenchone | NT | NT | NT | NT | Sabinene | NT | NT | NT | NT |
| Geraniol | NT | NT | NT | NT | Sabinene Hydrate | NT | NT | NT | NT |
| Geranyl Acetate | NT | NT | NT | NT | α-Terpinene | NT | NT | NT | NT |
| Guaiol | NT | NT | NT | NT | γ-Terpinene | NT | NT | NT | NT |
| α-Humulene | NT | NT | NT | NT | α-Terpineol | NT | NT | NT | NT |
| Isoborneol | NT | NT | NT | NT | Terpinolene | NT | NT | NT | NT |
| Isopulegol | NT | NT | NT | NT | Valencene | NT | NT | NT | NT |
| Limonene | NT | NT | NT | NT | Total | NT | NT | NT | NT |

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