


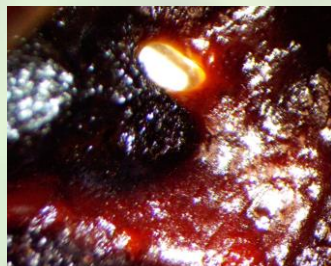
Certificate ID: **113445** Received: **2/8/23**
 Client Sample ID: **CBD Crude Ethanol Extraction 2021**
 Lot Number: **50_2021_00000131_C**
 Matrix: **Concentrates/Extracts-Distillate**

Scan QR Code
for authenticity



Sunset Lake Enterprises
25 Brewer Parkway
South Burlington, VT 05403-7326

| | | |
|---|--|---------------------------|
| Authorization: Andrew Aubin, Lab Director | Signature:  | Date: 2/14/2023 |
|---|--|---------------------------|



The data contained within this report was collected in accordance with the requirements of ISO/IEC17025:2017. I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.





CN: Cannabinoid Profile & Potency [WI-10-17 & WI-10-17-01]

Analyst: SD

Test Date: 2/9/2023

The client sample was analyzed for plant-based cannabinoids by Liquid Chromatography (LC). The collected data was compared to data collected for certified reference standards at known concentrations.

113445-CN

| ID | Weight % | Concentration (mg/g) | | | |
|----------------|---------------|----------------------|---|---|--------------|
| Δ9-THC | 3.29 | 32.9 |  | | |
| THCV | ND | ND | | | |
| CBD | 70.2 | 702 |  | | |
| CBDV | 0.492 | 4.92 | | | |
| CBG | 1.51 | 15.1 |  | | |
| CBC | 3.14 | 31.4 |  | | |
| CBN | 0.0710 | 0.710 | | | |
| THCA | ND | ND | | | |
| CBDA | 0.106 | 1.06 | | | |
| CBGA | ND | ND | | | |
| CBDVA | ND | ND | | | |
| Δ8-THC | ND | ND | | | |
| exo-THC | ND | ND | | | |
| Total | 78.8 | 788 | 0% | Cannabinoids (wt%) | 70.2% |
| Max THC | 3.29 | 32.9 | | Limit of Quantitation (LOQ) = 0.0453 wt% | |
| Max CBD | 70.3 | 703 | | Limit of Detection (LOD) = 0.0151 wt% | |

Ratio of Total CBD to THC 21.4:1

Max THC (and Max CBD) are calculated values for total cannabinoids after heating, assuming complete decarboxylation of the acid to the neutral form. It is calculated based on the weight loss of the acid group during decarboxylation: $MAX\ THC = (0.877 \times THCA) + THC$. This calculation does not include other cannabinoid isomers (eg. D8-THC and exo-THC). ND=None detected above the limits of detection (LOD), which is one third of Limit of Quantification (LOQ). For values reported as "<LOQ", the estimated value is included in the calculated Total.

MA: Water Activity [WI-10-25]

Analyst: ALF

Test Date: 2/9/2023

113445 ()-MAWater Activity (Aw): **0.380**

The water activity was recorded with a dew point moisture analyzer. Water activity, Aw, is the partial vapor pressure of water in a substance divided by the partial vapor pressure of pure water at the same temperature.

EA: Elemental Analysis [WI-10-13]

Analyst: ZDV

Test Date: 2/10/2023

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

113445-EA

| Symbol | Metal | Conc. ¹ (µg/kg) | RL (µg/kg) | Limits ² (µg/kg) | Status |
|--------|------------|----------------------------|------------|-----------------------------|--------|
| Al | Aluminum | 616 | 50 | - | |
| As | Arsenic | ND | 50 | 200 | PASS |
| Cd | Cadmium | ND | 50 | 200 | PASS |
| Ca | Calcium | ND | 500 | - | |
| Cr | Chromium | ND | 50 | 300 | PASS |
| Co | Cobalt | ND | 50 | 300 | PASS |
| Cu | Copper | ND | 50 | 3,000 | PASS |
| Fe | Iron | 1,910 | 50 | - | |
| Pb | Lead | ND | 50 | 500 | PASS |
| Mg | Magnesium | 571 | 50 | - | |
| Mn | Manganese | 58.0 | 50 | - | |
| Hg | Mercury | ND | 50 | 100 | PASS |
| Ni | Nickel | ND | 50 | 500 | PASS |
| P | Phosphorus | ND | 500 | - | |
| K | Potassium | 4,690 | 500 | - | |
| Se | Selenium | ND | 50 | - | |
| Ag | Silver | ND | 50 | 700 | PASS |
| S | Sulfur | 302,000 | 500 | - | |
| Sn | Tin | ND | 500 | 6,000 | PASS |
| Zn | Zinc | ND | 50 | - | |

1) ND = None detected to the Limit of Detection (LOD)

2) USP recommended maximum daily limits for inhalational drug product.

MB2: Pathogenic Bacterial Contaminants [WI-10-10]

Analyst: AEH

Test Date: 2/9/2023

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

113445-MB2

| Test ID | Analysis | Results | Units | Limits* | Status |
|-------------|----------------|----------|-------|--------------|--------|
| 113445-ECPT | E. coli (O157) | Negative | NA | Non Detected | PASS |
| 113445-SPT | Salmonella | Negative | NA | Non Detected | PASS |

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05]

Analyst: KM/BB

Test Date: 2/10/2023

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

113445-MY

| Test ID | Date | Results | MDL | Limits | Status* |
|------------------|-----------|---------|-------|----------|---------|
| Total Aflatoxin | 2/10/2023 | < MDL | 2 ppb | < 20 ppb | PASS |
| Total Ochratoxin | 2/10/2023 | < MDL | 3 ppb | < 20 ppb | PASS |

PST: Pesticide Analysis [WI-10-11]

Analyst: CJR

Test Date: 2/8/2023

The client sample was analyzed for pesticides using Liquid Chromatography with Mass Spectrometric detection (LC/MS/MS). The method used for sample prep was based on the European method for pesticide analysis (EN 15662).

113445-PST

| Analyte | CAS | Result | Units | LLD | Limits (ppb) | Status |
|--------------------|-------------|--------|-------|------|--------------|--------|
| Abamectin | 71751-41-2 | ND | ppb | 0.20 | 10 | PASS |
| Azoxystrobin | 131860-33-8 | ND | ppb | 0.10 | 100 | PASS |
| Bifenazate | 149877-41-8 | ND | ppb | 0.10 | 100 | PASS |
| Bifenthrin | 82657-04-3 | ND | ppb | 0.20 | 3000 | PASS |
| Cyfluthrin | 68359-37-5 | ND | ppb | 0.50 | 2000 | PASS |
| Dichlorvos | 62-73-7 | ND | ppb | 3.00 | 10 | PASS |
| Etoxazole | 153233-91-1 | ND | ppb | 0.10 | 100 | PASS |
| Fenoxycarb | 72490-01-8 | ND | ppb | 0.10 | 10 | PASS |
| Imazalil | 35554-44-0 | ND | ppb | 0.10 | 10 | PASS |
| Imidacloprid | 138261-41-3 | ND | ppb | 0.10 | 5000 | PASS |
| Myclobutanil | 88671-89-0 | ND | ppb | 0.10 | 100 | PASS |
| Paclobutrazol | 76738-62-0 | ND | ppb | 0.10 | 10 | PASS |
| Piperonyl butoxide | 51-03-6 | ND | ppb | 0.10 | 3000 | PASS |
| Pyrethrin | 8003-34-7 | ND | ppb | 0.10 | 10 | PASS |
| Spinosad | 168316-95-8 | ND | ppb | 0.10 | 10 | PASS |
| Spiromesifen | 283594-90-1 | ND | ppb | 0.10 | 100 | PASS |
| Spirotetramat | 203313-25-1 | ND | ppb | 0.10 | 100 | PASS |
| Trifloxystrobin | 141517-21-7 | ND | ppb | 0.10 | 100 | PASS |

* Pesticide results reported against action limits established by the State of California Bureau of Cannabis Control, California Code of Regulations Title 16, Division 42. ND indicates "none detected" above the lower limit of detection (LLD). Analytes marked with (*) indicate analytes for which no recovery was observed for a pre-spiked matrix sample due to matrix interference.

TP: Terpenes Profile [WI-10-37]

Analyst: CS

Test Date: 2/9/2023

The sample was analyzed for terpenes (WI-10-37) utilizing solvent extraction followed by Gas Chromatography (GC) utilizing flame ionization detection (FID). Chromatographic data were processed by quantitatively comparing the analytical peak areas against calibration curves prepared from certified reference standards.

113445-TP

| Compound | CAS | Conc. (wt%) | Conc. (ppm) | Qualitative Profile |
|---------------------|------------|-------------|-------------|---------------------|
| alpha-pinene | 80-56-8 | ND | ND | |
| camphene | 79-92-5 | ND | ND | |
| sabinene | 3387-41-5 | ND | ND | |
| beta-pinene | 127-91-3 | 0.0089 | 88.9 | |
| beta-myrcene | 123-35-3 | 0.0080 | 80.3 | |
| alpha-phellandrene | 99-83-2 | ND | ND | |
| delta-3-carene | 13466-78-9 | ND | ND | |
| alpha-terpinene | 99-86-5 | ND | ND | |
| p-cymene | 99-87-6 | ND | ND | |
| D-limonene | 5989-27-5 | ND | ND | |
| eucalyptol | 470-82-6 | ND | ND | |
| alpha-ocimene | 502-99-8 | ND | ND | |
| beta-ocimene | 13877-91-3 | ND | ND | |
| gamma-terpinene | 99-85-4 | ND | ND | |
| terpinolene | 586-62-9 | ND | ND | |
| L-fenchone | 7787-20-4 | ND | ND | |
| linalool | 78-70-6 | 0.0127 | 127 | |
| isopulegol | 89-79-2 | ND | ND | |
| menthol | 89-78-1 | ND | ND | |
| geraniol | 106-24-1 | ND | ND | |
| beta-caryophyllene | 87-44-5 | 0.256 | 2,560 | |
| alpha-humulene | 6753-98-6 | 0.133 | 1,330 | |
| cis-nerolidol | 3790-78-1 | ND | ND | |
| trans-nerolidol | 40716-66-3 | 0.0618 | 618 | |
| caryophyllene oxide | 1139-30-6 | 0.0797 | 797 | |
| guaial | 489-86-1 | 0.255 | 2,550 | |
| alpha-bisabolol | 23089-26-1 | 0.563 | 5,630 | |

Total Terpene: 1.4 wt%

* Certified reference standard not available for this compound. Concentration is estimated using the response factor from alpha-pinene. ND = None Detected. RL = Reporting Limit of 5 ppm.

VC: Analysis of Volatile Organic Compounds [WI-10-28]

Analyst: KAS

Test Date: 2/9/2023

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations.

113445-VC

| Compound | CAS | Amount ¹ | Limit ² | RL | Status |
|---------------|----------|---------------------|--------------------|-----|--------|
| Propane | 74-98-6 | ND | 1,000 ppm | 4 | PASS |
| Isobutane | 75-28-5 | ND | 1,000 ppm | 4 | PASS |
| Butane | 106-97-8 | ND | 1,000 ppm | 4 | PASS |
| Methanol | 67-56-1 | ND | 3,000 ppm | 100 | PASS |
| Pentane | 109-66-0 | ND | 5,000 ppm | 100 | PASS |
| Ethanol | 64-17-5 | 2,480 ppm | 5,000 ppm | 100 | PASS |
| Acetone | 67-64-1 | ND | 5,000 ppm | 100 | PASS |
| Isopropanol | 67-63-0 | ND | 5,000 ppm | 100 | PASS |
| Acetonitrile | 75-05-8 | ND | 410 ppm | 100 | PASS |
| Hexane | 110-54-3 | ND | 290 ppm | 100 | PASS |
| Ethyl Acetate | 141-78-6 | 1,650 ppm | 5,000 ppm | 100 | PASS |
| Heptane | 142-82-5 | ND | 5,000 ppm | 100 | PASS |

1) ND = Not detected at a level greater than the Reporting Limit (RL).

2) In ppm, based on USP recommended limits for residual solvents, adopted by the Massachusetts Department of Public Health for cannabis concentrates and extracts on 3/31/16. Butane/Propane limits are based on limits established for state of Colorado.

(*) For ethanol, as many formulations contain flavorings based on ethanol extracts of natural products, no status has been assigned.

END OF REPORT