



Certificate ID: **43868**

Received: **11/21/18**

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High Falls Extracts, LLC

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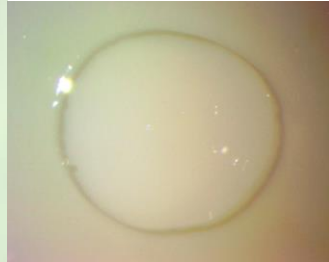
Attn: Rick Weissman

Client Sample ID: **CBD isolate**

Lot Number: **Isolate**

Matrix: **Tincture - Hemp Oil**

| | | |
|---|--|---------------------|
| Authorization: Jon Podgorni, Lab Manager | Signature:  | Date: 12/12/2018 |
|---|--|---------------------|



The data contained within this report was collected in accordance with the requirements of ISO/IEC17025:2005. 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]

Analyst: *JSG*

Test Date: *12/11/2018*

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.

43868-CN

| ID | Weight % | Conc. | | |
|---------|-----------|-------------|----|-------------------------|
| D9-THC | ND | ND | | |
| THCV | ND | ND | | |
| CBD | 5.69 wt % | 52.66 mg/mL | | |
| CBDV | 0.02 wt % | 0.19 mg/mL | | |
| CBG | ND | ND | | |
| CBC | ND | ND | | |
| CBN | ND | ND | | |
| THCA | ND | ND | | |
| CBDA | ND | ND | | |
| CBGA | ND | ND | | |
| Total | 5.71 wt% | 52.85 mg/mL | 0% | Cannabinoids (wt%) 5.7% |
| Max THC | - | - | | |
| Max CBD | 5.69 wt% | 52.66 mg/mL | | |

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 x THCA) + THC. ND = None detected above the limits of detection (LLD)

HM: Heavy Metal Analysis [WI-10-13]

Analyst: JFD

Test Date: 12/7/2018

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.

43868-HM

| Symbol | Metal | Conc. ¹ | Units | MDL | Use Limits ² | | Units | Status |
|--------|---------|--------------------|-------|-----|-------------------------|-----------|-------|--------|
| | | | | | All | Ingestion | | |
| As | Arsenic | ND | µg/kg | 4 | 200 | 1500 | µg/kg | PASS |
| Cd | Cadmium | ND | µg/kg | 1 | 200 | 500 | µg/kg | PASS |
| Hg | Mercury | ND | µg/kg | 2 | 100 | 1500 | µg/kg | PASS |
| Pb | Lead | ND | µg/kg | 2 | 500 | 1000 | µg/kg | PASS |

1) ND = None detected to Lowest Limits of Detection (LLD)

2) MA Dept. of Public Health: Protocol for MMJ and MIPS, Exhibit 4(a) for all products.

3)USP exposure limits based on daily oral dosing of 1g of concentrate for a 110 lb person.

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).

43868-PST

| Analyte | CAS | Result | Units | LLD | Limits (ppb) | Status |
|--------------------|-------------|--------|-------|-------|--------------|--------|
| Abamectin | 71751-41-2 | ND | ppb | 0.20 | 300 | PASS |
| Abamectin B1b | 65195-56-4 | ND | ppb | 0.20 | 300 | * |
| Azoxystrobin | 131860-33-8 | ND | ppb | 0.10 | 40000 | PASS |
| Bifenazate | 149877-41-8 | ND | ppb | 0.10 | 5000 | PASS |
| Bifenthrin | 82657-04-3 | ND | ppb | 0.20 | 500 | PASS |
| Cyfluthrin | 68359-37-5 | ND | ppb | 0.50 | 1000 | PASS |
| Daminozide | 1596-84-5 | ND | ppb | 10.00 | 10 | PASS |
| Etoxazole | 153233-91-1 | ND | ppb | 0.10 | 1500 | 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 | 3000 | PASS |
| Myclobutanil | 88671-89-0 | ND | ppb | 0.10 | 9000 | PASS |
| Paclobutrazol | 76738-62-0 | ND | ppb | 0.10 | 10 | PASS |
| Piperonyl butoxide | 51-03-6 | ND | ppb | 0.10 | 8000 | PASS |
| Pyrethrin | 8003-34-7 | ND | ppb | 0.1 | 1000 | PASS |
| Spinosad | 168316-95-8 | ND | ppb | 0.1 | 3000 | PASS |
| Spiromesifen | 283594-90-1 | ND | ppb | 0.10 | 12000 | PASS |
| Spirotetramat | 203313-25-1 | ND | ppb | 0.10 | 13000 | PASS |
| Trifloxystrobin | 141517-21-7 | ND | ppb | 0.10 | 30000 | PASS |

* Testing limits for ingestion established by the State of California: CCR, Title 16, Division 42, Chapter 5, Section 5313. 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.

END OF REPORT