PROVERDE LABORATORIES

Test Certificate

Certificate ID: **47440**
Client Sample ID: **SS-1-2019-7**
Lot Number: **512-513**
Matrix: **Concentrates/Extracts - Alcohol**

Received: **2/1/19**

Scan QR Code for authenticity

Ned

Authorization:	Signature:	Date:
Jon Podgorni, Lab Manager	Jon Podgorni	2/22/2019

PJLA Testing
Accreditation
80585

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.

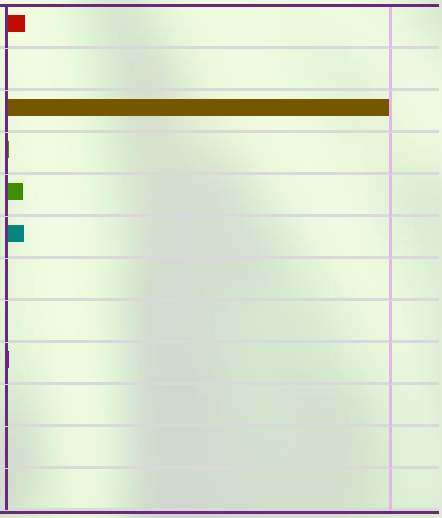
CN: Cannabinoid Profile & Potency [WI-10-17 & WI-10-17-01]

Analyst: JSG *Test Date: 2/6/2019*

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.

47440-CN

ID	Weight %	Conc.
D9-THC	3.11 wt %	31.12 mg/g
THCV	ND	ND
CBD	64.49 wt %	644.93 mg/g
CBDV	0.42 wt %	4.22 mg/g
CBG	2.74 wt %	27.37 mg/g
CBC	2.96 wt %	29.59 mg/g
CBN	ND	ND
THCA	ND	ND
CBDA	0.32 wt %	3.22 mg/g
CBGA	ND	ND
D8-THC	ND	ND
exo-THC	ND	ND
Total	74.05 wt%	740.46 mg/g
Max THC	3.11 wt%	31.12 mg/g
Max CBD	64.78 wt%	647.76 mg/g



Ratio of Total CBD to THC 20.8:1

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 x THCA) + THC. This calculation does not include other cannabinoid isomers (eg. D8-THC and exo-THC). ND = None detected above the limits of detection (LLD)

EA: Elemental Analysis [WI-10-13] *Analyst: JFD* *Test Date: 2/7/2019*

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.

47440-EA

Symbol	Metal	Conc. [1]	MDL	Limits [2]	Status
Al	Aluminum	939 ug/kg	5 ug/kg	-	
As	Arsenic	5 ug/kg	4 ug/kg	15000 ug/kg	PASS
Cd	Cadmium	34 ug/kg	1 ug/kg	5000 ug/kg	PASS
Ca	Calcium	38,290 ug/kg	500 ug/kg	-	
Cr	Chromium	ND	5 ug/kg	45000 ug/kg	PASS
Co	Cobalt	ND	10 ug/kg	-	
Cu	Copper	ND	500 ug/kg	3100000 ug/kg	PASS
Fe	Iron	5,857 ug/kg	5 ug/kg	-	
Pb	Lead	60 ug/kg	2 ug/kg	400000 ug/kg	PASS
Mg	Magnesium	44,432 ug/kg	500 ug/kg	-	
Mn	Manganese	1,311 ug/kg	500 ug/kg	-	
Hg	Mercury	4 ug/kg	2 ug/kg	9400 ug/kg	PASS
Mo	Molybdenum	ND	5000 ug/kg	-	
Ni	Nickel	ND	500 ug/kg	1500000 ug/kg	PASS
P	Phosphorus	ND	500 ug/kg	-	
K	Potassium	608,088 ug/kg	5 ug/kg	-	
Se	Selenium	24 ug/kg	10 ug/kg	-	
Ag	Silver	ND	10 ug/kg	-	
S	Sulfur	9,473 ug/kg	5 ug/kg	-	
Sn	Tin	ND	5000 ug/kg	-	
Zn	Zinc	9,181 ug/kg	5 ug/kg	15000000 ug/kg	PASS

MB1: Microbiological Contaminants [WI-10-09] *Analyst: AKR* *Test Date: 2/4/2019*

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.

47440-MB1

Symbol	Analysis	Results	Units	Limits*	Status
AC	Total Aerobic Bacterial Count	<100	CFU/g	10,000 CFU/g	PASS
CC	Total Coliform Bacterial Count	<100	CFU/g	100 CFU/g	PASS
EB	Total Bile Tolerant Gram Negative Count	<100	CFU/g	100 CFU/g	PASS
YM	Total Yeast & Mold	<100	CFU/g	1,000 CFU/g	PASS

Note: All recorded Microbiological tests are within the established limits.

MB2: Pathogenic Bacterial Contaminants [WI-10-10] *Analyst: MM* *Test Date: 2/5/2019*

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.

47440-MB2

Test ID	Analysis	Results	Units	Limits*	Status
47440-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
47440-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05] *Analyst: CJB* *Test Date: 2/8/2019*

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.

47440-MY

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	2/8/2019	< MDL	3 ppb	< 20 ppb	PASS
Total Ochratoxin	2/8/2019	9.8	2 ppb	< 20 ppb	PASS

PST: Pesticide Analysis [WI-10-11] *Analyst: CJH* *Test Date: 2/22/2019*

The client sample was anlayzed 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).

47440-PST

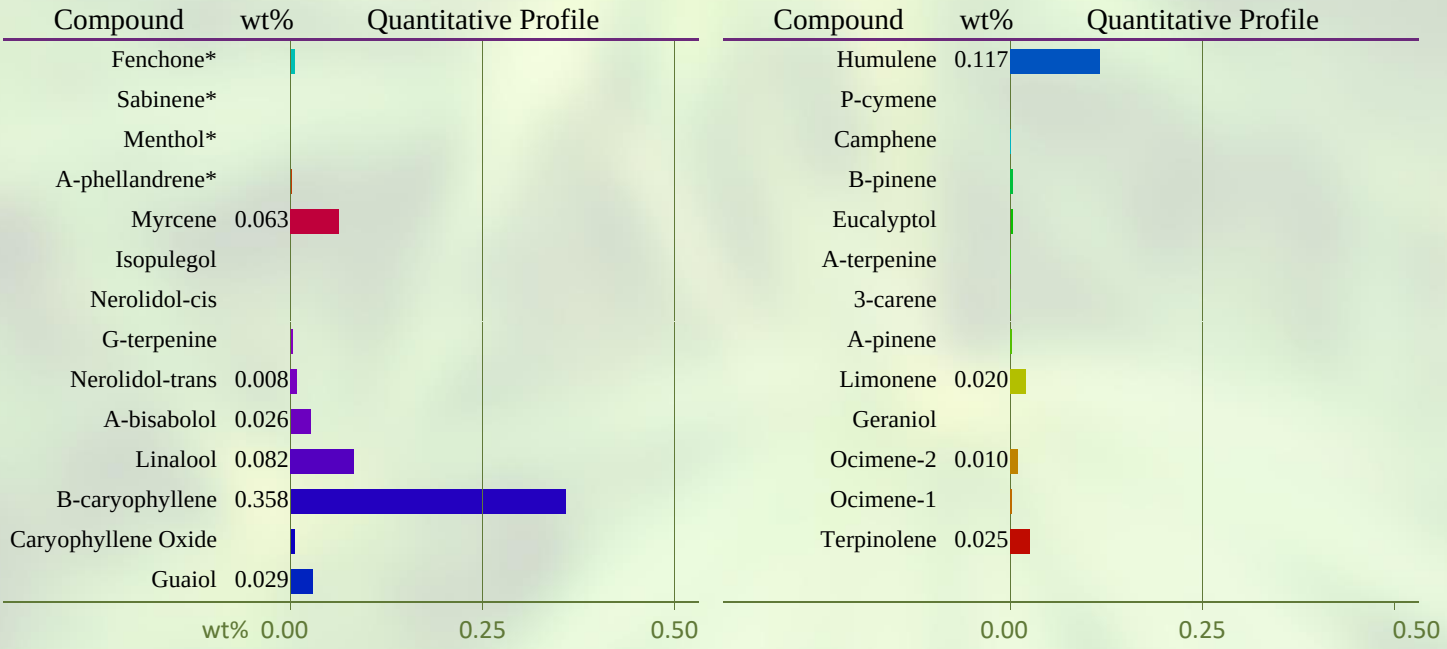
Analyte	CAS	Result	Units	LLD	Limits (ppb)	Status
Abamectin B1a	65495-55-3	ND	ppb	0.20	300	*
Abamectin B1b	65195-56-4	ND	ppb	0.20	300	*
Azoxystrobin	131860-33-8	ND	ppb	0.10	40000	PASS
Bifenazate	149877-41-8	ND	ppb	0.10	5000	PASS
Bifenthrin	82657-04-3	ND	ppb	0.20	500	PASS
Cyfluthrin	68359-37-5	ND	ppb	0.50	1000	*
Daminozide	1596-84-5	ND	ppb	10.00	10	*
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	*
Spinosad	168316-95-8	ND	ppb	0.1	3000	PASS
Spiromesifen	283594-90-1	ND	ppb	0.10	12000	*
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.

TP: Terpenes Profile [WI-10-08] *Analyst: CMA* *Test Date: 2/6/2019*

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.

47440-TP



Total Terpene: 0.8 wt%

* Indicates semi-qualitative calculation based on recorded peak areas.

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.

47440-VC

Compound	CAS	Amount [1]	Limit [2]	RL	Status
Propane	74-98-6	ND	1,000 ppm	2	PASS
Isobutane	75-28-5	ND	1,000 ppm	2	PASS
Butane	106-97-8	ND	1,000 ppm	2	PASS
Methanol	67-56-1	46 ppm	3,000 ppm	20	PASS
Ethanol	64-17-5	17,517 ppm	5,000 ppm	20	FAIL
Acetone	67-64-1	111 ppm	1,000 ppm	20	PASS
Isopropanol	67-63-0	ND	5,000 ppm	20	PASS
Acetonitrile	75-05-8	ND	410 ppm	20	PASS
Hexane	110-54-3	ND	290 ppm	20	PASS
Ethyl Acetate	141-78-6	368 ppm	5,000 ppm	20	PASS
Heptane	142-82-5	ND	5,000 ppm	20	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 on 3/31/16. Butane/Propane limits are based on limits established for state of Colorado.

END OF REPORT