



Certificate ID: **74372**  
 Client Sample ID: **122319D - DEC**  
 Lot Number: **18-45180151331**  
 Matrix: **Concentrates/Extracts - CO2**

Received: **12/27/19**

Scan QR Code for authenticity



Authorization: Jon Podgorni, Lead Research Chemist	Signature: <i>Jon Podgorni</i>	Date: 1/8/2020
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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: *JSG*      Test Date: *12/31/2019*

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.

**74372-CN**

ID	Weight %	Concentration (mg/g)	
D9-THC	0.14	1.42	
THCV	ND	ND	
CBD	12.51	125.07	
CBDV	ND	ND	
CBG	<0.10	<LOQ	
CBC	0.35	3.48	
CBN	<0.10	<LOQ	
THCA	ND	ND	
CBDA	1.95	19.53	
CBGA	ND	ND	
D8-THC	ND	ND	
exo-THC	ND	ND	
Total	15.09	150.91	0%      Cannabinoids (wt%)      12.5%
Max THC	0.14	1.42	
Max CBD	14.22	142.19	

Limit of Quantitation (LOQ) = 0.10 wt%

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 (LOD), which is half of LOQ.

**MA: Moisture Analysis [WI-10-25]**

Analyst: MTB

Test Date: 12/30/2019

**74372-MA**Weight loss on drying: **0.1%**

The moisture content of the client sample was evaluated based on weight loss observed on heating. The recorded weight loss is due to the loss of water and volatiles (terpenes) observed upon sample drying.

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

Analyst: CJS

Test Date: 1/2/2020

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.

**74372-HM**

Symbol	Metal	Conc. <sup>1</sup> (µg/kg)	RL	Use Limits <sup>2</sup> (µg/kg)		Status
				All	Ingestion	
As	Arsenic	401	50	200	1500	Oral Only
Cd	Cadmium	ND	50	200	500	PASS
Hg	Mercury	ND	50	100	1500	PASS
Pb	Lead	ND	50	500	1000	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.

**MB1: Microbiological Contaminants [WI-10-09]**

Analyst: MM

Test Date: 12/30/2019

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.

**74372-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: LabAdmin

Test Date: 12/31/2019

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.

**74372-MB2**

Test ID	Analysis	Results	Units	Limits*	Status
74372-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
74372-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

**MY: Mycotoxin Testing [WI-10-05]**

Analyst: AKR

Test Date: 12/30/2019

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.

**74372-MY**

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	12/30/2019	< MDL	2 ppb	< 20 ppb	PASS
Total Ochratoxin	12/30/2019	3.0	3 ppb	< 20 ppb	PASS

**PST: Pesticide Analysis [WI-10-11]**

Analyst: CJR

Test Date: 1/7/2020

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).

**74372-PST**

Analyte	CAS	Result	Units	LLD	Limits (ppb)	Status
Abamectin	71751-41-2	ND	ppb	0.2	100	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
Daminozide	1596-84-5	ND	ppb	10.00	10	*
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	313	ppb	0.10	3000	PASS
Pyrethrin	8003-34-7	ND	ppb	0.1	500	PASS
Spinosad	168316-95-8	ND	ppb	0.1	100	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

\* Testing limits for inhalation 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.

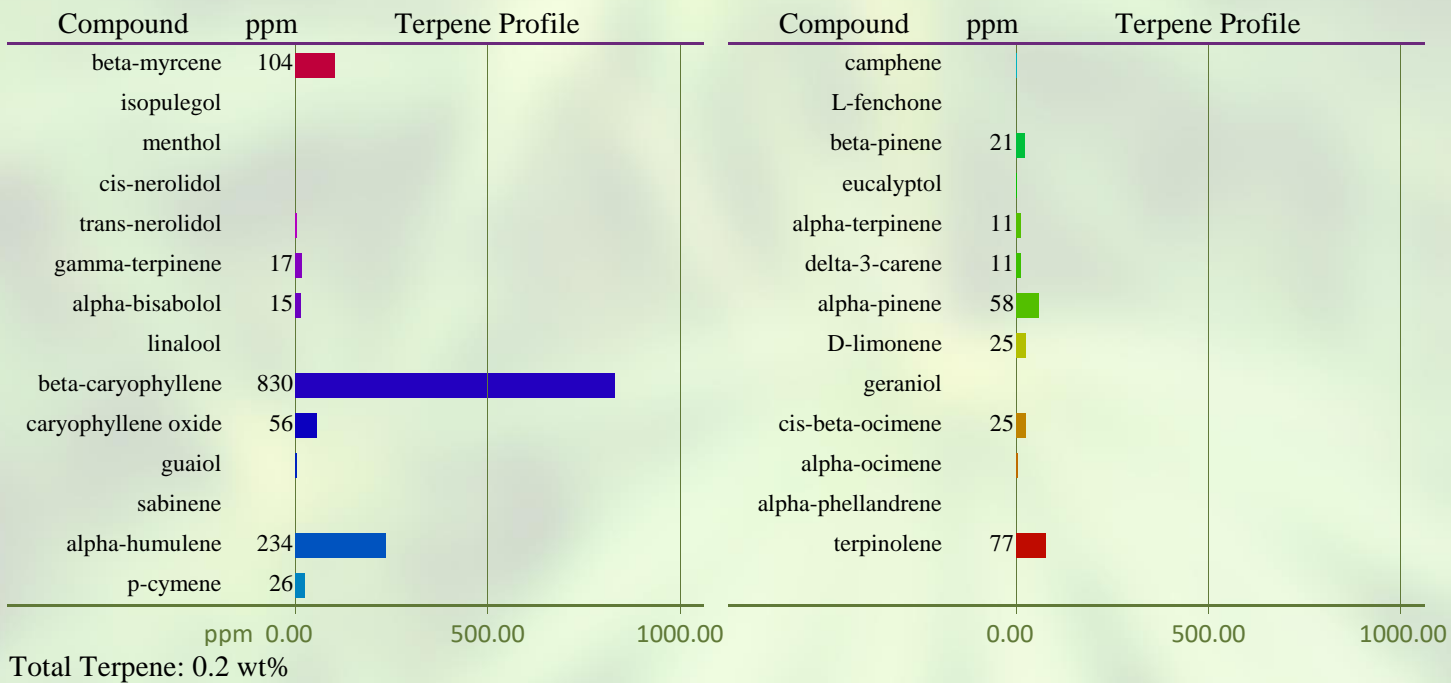
**TP: Terpenes Profile [WI-10-27]**

Analyst: JR

Test Date: 12/31/2019

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. All values are semiquantitative estimates based on recorded peak areas relative to terpene calibration data.

**74372-TP**



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

Analyst: JR

Test Date: 12/27/2019

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.

**74372-VC**

Compound	CAS	Amount <sup>1</sup>	Limit <sup>2</sup>	RL	Status
Propane	74-98-6	ND	1,000 ppm	100	PASS
Isobutane	75-28-5	ND	1,000 ppm	100	PASS
Butane	106-97-8	ND	1,000 ppm	100	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	ND	5,000 ppm	100	*
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
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**