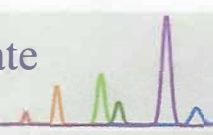


Test Certificate

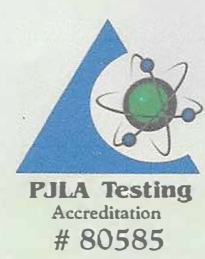
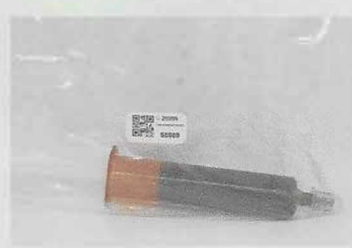


Certificate ID: **58589**
 Client Sample ID: **Mmb**
 Lot Number: **7-1-19**
 Matrix: **Concentrates/Extracts - Alcohol**

Received: **7/9/19**



Signature:  Date: **7/16/2019**



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: **LCH** Test Date: **7/12/2019**

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.

58589-CN

ID	Weight %	Concentration (mg/g)		
D9-THC	3.11	31.12		
THCV	0.19	1.88		
CBD	66.85	668.52		
CBDV	0.54	5.37		
CBG	1.36	13.57		
CBC	3.44	34.44		
CBN	0.05	0.48		
THCA	ND	ND		
CBDA	0.92	9.21		
CBGA	ND	ND		
D8-THC	ND	ND		
exo-THC	ND	ND		
Total	76.46	764.58		0% Cannabinoids (wt%) 66.9%
Max THC	3.11	31.12		
Max CBD	67.66	676.59		

Ratio of Total CBD to THC 21.7:1 Limit of Quantitation (LOQ) = 0.13 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 (LLD)

EA: Elemental Analysis [WI-10-13]

Analyst: JFD

Test Date: 7/11/2019

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.

58589-EA

Symbol	Metal	Conc. ¹	MDL	Limits ²	Status
Al	Aluminum	358 ug/kg	5 ug/kg	-	
As	Arsenic	10 ug/kg	4 ug/kg	150 ug/kg	PASS
Cd	Cadmium	7 ug/kg	1 ug/kg	150 ug/kg	PASS
Ca	Calcium	25,558 ug/kg	500 ug/kg	-	
Cr	Chromium	79 ug/kg	5 ug/kg	2500 ug/kg	PASS
Co	Cobalt	ND	10 ug/kg	-	
Cu	Copper	ND	500 ug/kg	10000 ug/kg	PASS
Fe	Iron	698 ug/kg	5 ug/kg	-	
Pb	Lead	32 ug/kg	2 ug/kg	500 ug/kg	PASS
Mg	Magnesium	31,350 ug/kg	500 ug/kg	-	
Mn	Manganese	877 ug/kg	500 ug/kg	-	
Hg	Mercury	ND	2 ug/kg	150 ug/kg	PASS
Mo	Molybdenum	ND	50 ug/kg	1000 ug/kg	PASS
Ni	Nickel	ND	50 ug/kg	150 ug/kg	PASS
P	Phosphorus	49,053 ug/kg	500 ug/kg	-	
K	Potassium	879,606 ug/kg	5 ug/kg	-	
Se	Selenium	15 ug/kg	10 ug/kg	-	
Ag	Silver	ND	10 ug/kg	-	
S	Sulfur	342 ug/kg	5 ug/kg	-	
Sn	Tin	ND	5000 ug/kg	-	
Zn	Zinc	1,902 ug/kg	5 ug/kg	-	

1) ND = None detected to the Method Detection Limit (MDL)

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

MB1: Microbiological Contaminants [WI-10-09]

Analyst: SJE

Test Date: 7/12/2019

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.

58589-MB1

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

Test Date: 7/13/2019

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.

58589-MB2

Test ID	Analysis	Results	Units	Limits*	Status
58589-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
58589-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05]

Analyst: AKR

Test Date: 7/15/2019

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.

58589-MY

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	7/15/2019	< MDL	2 ppb	< 20 ppb	PASS
Total Ochratoxin	7/15/2019	< MDL	3 ppb	< 20 ppb	PASS

PST: Pesticide Analysis [WI-10-11]

Analyst: RAS

Test Date: 7/15/2019

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).

58589-PST

Analyte	CAS	Result	Units	LLD	Limits (ppb)	Status
Abamectin B1a	65495-55-3	ND	ppb	0.20	300	PASS
Abamectin B1b	65195-56-4	ND	ppb	0.20	300	PASS
Azoxystrobin	131860-33-8	40	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	*
Etoazole	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
Pacloutrazol	76738-62-0	ND	ppb	0.10	10	PASS
Piperonyl butoxide	51-03-6	674	ppb	0.10	8000	PASS
Spiromesifen	283594-90-1	76	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.