PROVERDE LABORATORIES

Certificate of Analysis

Certificate ID: **115888**
Client Sample ID: **Hot Flash**
Lot Number: **20023F**
Matrix: **Personal Care-Transdermal Patch**

Received: **5/15/23**

Scan QR Code for authenticity

La Mend
202 La Vista Drive
Nashville, TN 37215

Authorization:	Signature:	Date:
Andrew Aubin, Lab Director		5/19/2023

PJLA Testing
Accreditation
80585

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: 5/17/2023*

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.

115888-CN

ID	Weight %	Concentration (mg/patch)
Δ9-THC	ND	ND
THCV	ND	ND
CBD	8.05	18.2
CBDV	<LOQ	<LOQ
CBG	ND	ND
CBC	ND	ND
CBN	ND	ND
THCA	ND	ND
CBDA	ND	ND
CBGA	ND	ND
CBDVA	ND	ND
Δ8-THC	ND	ND
exo-THC	ND	ND
Total	8.05	18.2
Max THC	ND	ND
Max CBD	8.05	18.2

Limit of Quantitation (LOQ) = 0.0354 wt%
Limit of Detection (LOD) = 0.0118 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 one third of Limit of Quantification (LOQ). For values reported as "<LOQ", the estimated value is included in the calculated Total.

EA: Elemental Analysis [WI-10-13] *Analyst: ZDV* *Test Date: 5/17/2023*

This sample was analyzed by elemental analysis using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) for the identification of heavy metal constituents. External calibration curves for heavy metals were used for quantitation, with an additional internal reference standard. Resulting data was compared with a sample blank. 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.

115888-EA-RI

Symbol	Metal	Conc.[1] (µg/kg)	RL (µg/kg)	Limits[2] (µg/kg)	Status
Al	Aluminum	3,650	50	-	
As	Arsenic	ND	50	15,000	PASS
Cd	Cadmium	ND	50	5,000	PASS
Ca	Calcium	2,880	500	-	
Cr	Chromium	ND	50	45,000	PASS
Co	Cobalt	ND	50	-	
Cu	Copper	63.0	50	3,100,000	PASS
Fe	Iron	3,300	50	-	
Pb	Lead	ND	50	400,000	PASS
Mg	Magnesium	6,240	50	-	
Mn	Manganese	889	50	-	
Hg	Mercury	ND	50	9,400	PASS
Ni	Nickel	ND	50	1,500,000	PASS
P	Phosphorus	1,610	500	-	
K	Potassium	29,400	500	-	
Se	Selenium	ND	50	-	
Ag	Silver	ND	50	-	
S	Sulfur	331,000	500	-	
Sn	Tin	ND	500	-	
Zn	Zinc	85.0	50	15,000,000	PASS

1) ND = None detected to the Limit of Detection (LOD)
2) USP recommended limits for elemental analysis.

MB1: Microbiological Contaminants [WI-10-09] *Analyst: BKB* *Test Date: 5/15/2023*

This sample was analyzed for microbiological contaminants using an automated Most Probable Number (MPN) methodology with cultured enrichments. 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.

115888-MB1

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

Recommended limits established by the American Herbal Pharmacopoeia (AHP) monograph for Cannabis Inflorescence [2013], for consumable botanical products, including processed and unprocessed cannabis materials, and solvent-based extracts. Note: All recorded Microbiological tests are within the established limits.

MB2: Pathogenic Bacterial Contaminants [WI-10-10] *Analyst: AEH* *Test Date: 5/16/2023*

This sample was analyzed for pathogenic bacteria using an automated Enzyme Linked Fluorescent Assay (ELFA). 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. Quality control checks are performed monthly by running both a positive and a negative control sample for each pathogen. Reports may not be reproduced except in their entirety.

115888-MB2

Test ID	Analysis	Results	Units	Limits*	Status
115888-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
115888-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05] *Analyst: KM* *Test Date: 5/16/2023*

This sample was analyzed for mycotoxins using an Immunoaffinity based assay (IA). Data was compared to readings from standard reference materials. 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.

115888-MY

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	5/16/2023	< MDL	2 ppb	< 20 ppb	PASS
Total Ochratoxin	5/16/2023	< MDL	3 ppb	< 20 ppb	PASS

PST: Pesticide Analysis [WI-10-11] *Analyst: CJR* *Test Date: 5/16/2023*

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).

115888-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

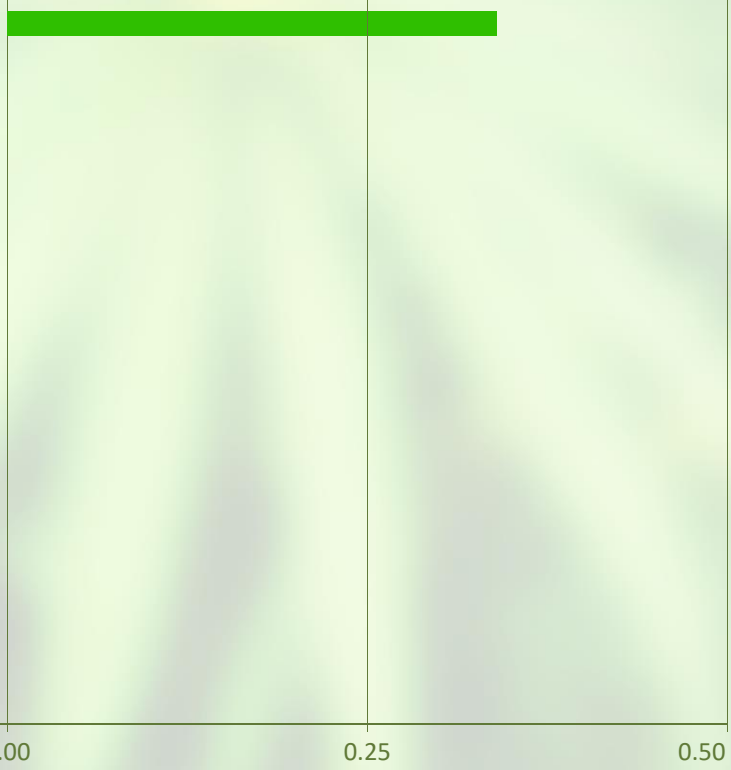
* Pesticide results reported against action limits established by the State of California Bureau of Cannabis Control, California Code of Regulations Title 16, Division 42. ND indicates "none detected" above the lower limit of detection (LLD). Analytes marked with (*) indicate analytes for which no recovery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

TP: Terpenes Profile [WI-10-37] *Analyst: CS* *Test Date: 5/16/2023*

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.

115888-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	ND	ND	
beta-myrcene	123-35-3	ND	ND	
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	0.340	3,400	
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	
L-fenchone	7787-20-4	ND	ND	
terpinolene	586-62-9	ND	ND	
linalool	78-70-6	ND	ND	
isopulegol	89-79-2	ND	ND	
menthol	89-78-1	ND	ND	
geraniol	106-24-1	ND	ND	
beta-caryophyllene	87-44-5	ND	ND	
alpha-humulene	6753-98-6	ND	ND	
cis-nerolidol	3790-78-1	ND	ND	
trans-nerolidol	40716-66-3	ND	ND	
caryophyllene oxide	1139-30-6	ND	ND	
guaiol	489-86-1	ND	ND	
alpha-bisabolol	23089-26-1	ND	ND	



Total Terpene: 0.3 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: 5/17/2023*

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.

115888-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	ND	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
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