



Certificate ID: **98804**  
 Received: **10/28/21**  
 Client Sample ID: **600mg Topical Cream**  
 Lot Number:  
 Matrix: **Topicals - Lotion**

Scan QR Code  
for authenticity



Authorization:  
Chris Hudalla, Chief Science Officer

Signature: *Christopher Hudalla*

Date:  
11/5/2021



The data contained within this report was collected in accordance with the requirements of ISO/IEC 17025:2017. 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: PK

Test Date: 11/4/2021

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.

**98804-CN**

ID	Weight %	Concentration (mg/g)		
D9-THC	0.0522	0.522		
THCV	ND	ND		
CBD	1.23	12.3		
CBDV	ND	ND		
CBG	0.0124	0.124		
CBC	0.0320	0.320		
CBN	ND	ND		
THCA	ND	ND		
CBDA	ND	ND		
CBGA	ND	ND		
D8-THC	ND	ND		
exo-THC	ND	ND		
Total	1.33	13.3	0%	Cannabinoids (wt%) 1.23%
Max THC	0.0522	0.522		Limit of Quantitation (LOQ) = 0.0100 wt%
Max CBD	1.23	12.3		Limit of Detection (LOD) = 0.0033 wt%

**Ratio of Total CBD to THC 23.6:1**

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:  $MAX\ THC = (0.877 \times THCA) + THC$ . 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: CJS

Test Date: 11/2/2021

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**98804-EA**

Symbol	Metal	Conc. <sup>1</sup> (µg/kg)	RL (µg/kg)	Limits <sup>2</sup> (µg/kg)	Status
Al	Aluminum	863	50	-	
As	Arsenic	ND	50	1,500	PASS
Cd	Cadmium	ND	50	500	PASS
Ca	Calcium	63,900	500	-	
Cr	Chromium	ND	50	1,100,000	PASS
Co	Cobalt	ND	50	5,000	PASS
Cu	Copper	501	50	300,000	PASS
Fe	Iron	1,100	50	-	
Pb	Lead	ND	50	500	PASS
Mg	Magnesium	34,500	50	-	
Mn	Manganese	192	50	-	
Hg	Mercury	ND	50	3,000	PASS
Ni	Nickel	ND	50	20,000	PASS
P	Phosphorus	3,960	500	-	
K	Potassium	ND	500	-	
Se	Selenium	ND	50	-	
Ag	Silver	ND	50	15,000	PASS
S	Sulfur	3,660	500	-	
Sn	Tin	994	500	600,000	PASS
Zn	Zinc	394	50	-	

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

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



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

Analyst: MM

Test Date: 10/29/2021

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.

**98804-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.

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

Analyst: CJR

Test Date: 11/1/2021

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).

**98804-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

\* Testing limits established by the Massachusetts Department of Public Health, Protocol for Sampling and Analysis of Finished Medical Marijuana Products and Marijuana-Infused Products for Massachusetts Registered Medical Marijuana Dispensaries, Exhibit 5. 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-10-27]**

Analyst: CJS

Test Date: 11/1/2021

Client sample analysis was performed using full evaporative technique (FET) headspace sample delivery and gas chromatographic (GC) compound separation. A combination of flame ionization detection (FID) and/or mass spectrometric (MS) detection with mass spectral confirmation against the National Institute of Standards and Technology (NIST) Mass Spectral Database, Revision 2017 were used. Chromatographic and/or mass spectral data were processed by quantitatively comparing the analytical peak areas against calibration curves prepared from certified reference standards.

**98804-TP**

Compound	CAS	Conc. (wt%)	Conc. (ppm)	Qualitative Profile
alpha-pinene	80-56-8	0.0090	90.1	
camphene	79-92-5	<RL	<RL	
sabinene*	3387-41-5	0.0046	46.1	
beta-myrcene	123-35-3	0.0243	243	
beta-pinene	127-91-3	ND	ND	
delta-3-carene	13466-78-9	0.0029	28.8	
D-limonene	138-86-3	1.58	15,800	
p-cymene	99-87-6	ND	ND	
eucalyptol	470-82-6	0.0006	5.91	
gamma-terpinene	99-85-4	<RL	<RL	
terpinolene	586-62-9	<RL	<RL	
linalool	78-70-6	0.0024	23.9	
menthol*	89-78-1	ND	ND	
geraniol	106-24-1	ND	ND	
beta-caryophyllene	87-44-5	0.0023	22.6	
alpha-humulene	6753-98-6	0.0007	6.60	
cis-nerolidol	3790-78-1	ND	ND	
trans-nerolidol	40716-66-3	ND	ND	
guaiol	489-86-1	ND	ND	
caryophyllene oxide	1139-30-6	ND	ND	
wt%				0.00 1.00 2.00

Total Terpene: 1.6 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.

**END OF REPORT**