

Certificate ID: **29277-99**

Received: **4/11/18**

Scan QR Code for authenticity



Hemp Essentials

6427 Hwy 146, STE 4

Crestwood, KY 40014

Attn: Krista Pfeiffer

Client Sample ID: **Hemp Essentials 1F-18**

Lot Number:

Matrix: **Tincture - Hemp Oil**

Authorization:
Chris Hudalla, Chief Science Officer

Signature: *Christopher Hudalla*

Date:
10/10/2018



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]

Analyst: JDP

Test Date: 4/19/2018

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.

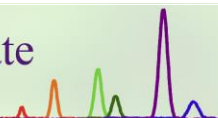
29277-CN

ID	Weight %	Conc.		
D9-THC	0.18 wt %	1.72 mg/mL		
THCV	ND	ND		
CBD	5.46 wt %	51.78 mg/mL		
CBDV	0.11 wt %	1.01 mg/mL		
CBG	0.12 wt %	1.09 mg/mL		
CBC	0.40 wt %	3.75 mg/mL		
CBN	0.01 wt %	0.12 mg/mL		
THCA	ND	ND		
CBDA	0.26 wt %	2.46 mg/mL		
CBGA	ND	ND		
Total	6.53 wt%	61.93 mg/mL	0%	Cannabinoids (wt%) 5.5%
Max THC	0.18 wt%	1.72 mg/mL		
Max CBD	5.69 wt%	53.94 mg/mL		

Ratio of Total CBD to THC 31.4:1

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. ND = None detected above the limits of detection (LLD)

END OF REPORT




Certificate ID: **29278-99** Received: **4/11/18**
 Client Sample ID: **Hemp Essentials 1F-18**
 Lot Number:
 Matrix: **Tincture - Hemp Oil**

Scan QR Code for authenticity



Hemp Essentials
6427 Hwy 146, STE 4
Crestwood, KY 40014
Attn: Krista Pfeiffer

Authorization: Chris Hudalla, Chief Science Officer	Signature: 	Date: 10/10/2018
--	--	---------------------



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.

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

Analyst: JFD

Test Date: 4/19/2018

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.

29278-HM

Symbol	Metal	Conc. ¹	Units	MDL	Use Limits ²		Units	Status
					All	Ingestion		
As	Arsenic	ND	µg/kg	4	200	1500	µg/kg	PASS
Cd	Cadmium	ND	µg/kg	1	200	500	µg/kg	PASS
Hg	Mercury	ND	µg/kg	2	100	1500	µg/kg	PASS
Pb	Lead	ND	µg/kg	2	500	1000	µg/kg	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: MS

Test Date: 4/11/2018

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.

29278-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

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

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.

29278-MB2

Test ID	Analysis	Results	Units	Limits*	Status
29278-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
29278-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05]

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.

29278-MY

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	4/17/2018	< MDL	3 ppb	< 20 ppb	PASS
Total Ochratoxin	4/17/2018	< MDL	2 ppb	< 20 ppb	PASS

END OF REPORT