



100 south 5th street, suite 1085
minneapolis, minnesota 55402

1.800.665.HEMP
www.manitobaharvest.com

CERTIFICATE OF ANALYSIS

Product:	Broad Spectrum Hemp Extract Tincture – Peppermint
Lot No:	190711
Source Lot No:	E19013-3
SKU#:	6119
Date of Manufacture:	June 10, 2019
Best Before Date:	June 10, 2021
Ingredients:	Broad Spectrum Hemp Extract (<i>Cannabis Sativa</i>) (aerial parts), Other ingredients: Organic Coconut Oil MCT, Organic Peppermint Oil.

Test	Analytical Result	Specification	Testing Method
PROFILE			
CBD (total)	10 mg/ml	8-12 mg/ml	HPLC * (LOQ <50 ppm)
CBD	1.057 wt. %	<i>Report only</i>	HPLC * (LOQ <50 ppm)
CBDA	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
CBC	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
CBCA	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
CBG	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
CBGA	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
CBN	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
Δ9 THC (total)	ND	< 0.01%	Calculated *
Δ9 THC	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
THCA	ND	<i>Report only</i>	HPLC * (LOQ <50 ppm)
TERPENES			
Total Terpenes	12 mg/100g	<i>Report only</i>	GC-MS *
(-)-alpha-Bisabolol	< 1.0 mg/100g	<i>Report only</i>	
Camphene	< 1.0 mg/100g	<i>Report only</i>	
(1S)-(+)-3-Carene	54 mg/100g	<i>Report only</i>	
beta-Caryophyllene	3 mg/100g	<i>Report only</i>	
p-Cymene	120 mg/100g	<i>Report only</i>	



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Eucalyptol	3.1 mg/100g	Report only	
alpha-Humulene (alpha-Caryophyllene)	< 1.0 mg/100g	Report only	
(-)-Isopulegol	41 mg/100g	Report only	
(R)-(+)-Limonene	3.6 mg/100g	Report only	
Linalool	5.9 mg/100g	Report only	
beta-Myrcene	0.82 mg/100g	Report only	
(E)-b-Ocimene	2.6 mg/100g	Report only	
(Z)-b-Ocimene	12 mg/100g	Report only	
alpha-Pinene	16 mg/100g	Report only	
beta-Pinene	6.2 mg/100g	Report only	
alpha-Terpinene	8.8 mg/100g	Report only	
gamma-Terpinene	3.1 mg/100g	Report only	
Terpinolene	12 mg/100g	Report only	
MICROBIOLOGICAL			
Standard Plate Count	< 10 cfu/g	< 10,000 cfu/g	AOAC 966.23 *
Total Coliforms	< 10 cfu/g	< 100 cfu/g	AOAC 991.14 *
Yeast & Mold	< 10 cfu/g	< 1,000 cfu/g	BAM Chapter 18 *
<i>E. coli</i>	< 10 cfu/g	< 10 cfu/g	AOAC 991.14 *
<i>Salmonella</i>	Negative	Negative in 25g	AOAC 2004.03 *
MYCOTOXINS			
Total Aflatoxin	< 2 ppb	< 20 ppb	UHPLC-MS/MS *
Total Ochratoxin	< 3 ppb	< 20 ppb	
CHEMICAL			
Residual Solvents	ND	No detection	USP <467> *
Pesticides	ND	No detection	LC/MS/MS AOAC 2007.01 *
Lead	< 0.006 ppm	< 0.5 ppm	AOAC 993.14 *
Arsenic	< 0.01 ppm	< 0.2 ppm	
Cadmium	< 0.005 ppm	< 0.1 ppm	
Mercury	< 0.005 ppm	< 0.1 ppm	
Gluten	< 5 ppm	< 20 ppm	AOAC 2012.01 *
ORGANOLEPTIC			



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Appearance	Conforms	Liquid	Visual
Color	Conforms	Yellow to Amber	Visual
Odor	Conforms	Mint	Olfactory
PHYSICAL DOSAGE			
Fill Volume	32 ml	≥ 30 ml	QCU-90-005

ND = Not detected.

* Tested at ISO 17025:2005 accredited 3rd Party Laboratory: Eurofins Bidiagnostics.

A handwritten signature in black ink, appearing to read "A. Cassels", written over a horizontal line.

Aaron Cassels
Quality Control Coordinator

September 20, 2019
Date