



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

1.800.665.HEMP
www.manitobaharvest.com

CERTIFICATE OF ANALYSIS

Product: **Broad Spectrum Hemp Extract (BSHE)
Plant Protein Blend – Unsweetened**

Lot No: **191007**

Source Lot No: P0959

SKU#: 6138

Date of Manufacture: October 3, 2019

Best Before Date: October 7, 2020

Ingredients: Organic pea protein concentrate, Organic hemp protein concentrate, Organic guar gum. Contains less than 1% of broad spectrum hemp extract, Organic coconut oil MCT, Organic acacia gum, Natural oregano extract.

Test	Analytical Result	Specification	Testing Method
PROFILE			
CBD (total)	13.05 mg/serving	12-18 mg/serving	HPLC * (LOQ <50 ppm)
CBD	0.05 wt. %	<i>Report only</i>	HPLC * (LOQ <50 ppm)
CBDa	<LOQ	<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			
(-)-alpha-Bisabolol	< 10 ppm	<i>Report only</i>	GC-MS*
Camphene	< 10 ppm	<i>Report only</i>	
(1S)-(+)-3-Carene	< 10 ppm	<i>Report only</i>	
beta-Caryophyllene	< 10 ppm	<i>Report only</i>	
p-Cymene	< 10 ppm	<i>Report only</i>	



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Eucalyptol	< 10 ppm	Report only	
alpha-Humulene (alpha-Caryophyllene)	< 10 ppm	Report only	
(-)-Isopulegol	< 10 ppm	Report only	
(R)-(+)-Limonene	< 10 ppm	Report only	
Linalool	< 10 ppm	Report only	
beta-Myrcene	< 10 ppm	Report only	
(E)-b-Ocimene	< 6 ppm	Report only	
(Z)-b-Ocimene	< 3 ppm	Report only	
alpha-Pinene	< 10 ppm	Report only	
beta-Pinene	< 10 ppm	Report only	
alpha-Terpinene	< 10 ppm	Report only	
gamma-Terpinene	< 10 ppm	Report only	
Terpinolene	< 10 ppm	Report only	
MICROBIOLOGICAL			
Standard Plate Count	350est	< 10,000 cfu/g	AOAC 966.23 *
Total Coliforms	< 10 cfu/g	< 100 cfu/g	AOAC 991.14 *
Yeast	< 10 cfu/g	< 1,000 cfu/g	BAM Chapter 18 *
Molds	10est 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			
Aflatoxin B1	< 0.5 ppb	< 20 ppb	UHPLC-MS/MS *
Aflatoxin B2	< 0.5 ppb	< 20 ppb	
Aflatoxin G1	< 0.5 ppb	< 20 ppb	
Aflatoxin G2	< 0.5 ppb	< 20 ppb	
Ochratoxin A	< 1.0 ppb	Report only	
CHEMICAL			
Pesticides	ND	No detection	LC/MS/MS AOAC 2007.01 *
Lead	0.007 ppm	< 0.5 ppm	AOAC 993.14 *
Arsenic	0.016 ppm	< 0.2 ppm	
Cadmium	0.037 ppm	< 0.1 ppm	



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Mercury	< 0.005 ppm	< 0.1 ppm	
Gluten	< 3 ppm	< 20 ppm	AOAC 2012.01 *
Residual solvents (Class 2)	ND	No detection	USP <467> *
Acetic acid (Class 3)	1300 ppm	< 5000 ppm	
Formic acid (Class 3)	< 200 ppm	< 5000 ppm	
ORGANOLEPTIC			
Colour	Light tan with a hint of green		Internal SOP
Odour	Neutral, slightly nutty		Internal SOP
Taste	Neutral, bland, slightly umami, slightly nutty flavor		Internal SOP
Appearance	Fine powder, uniform, no particles		Internal SOP
Texture	Very fine, smooth, creamy		Internal SOP

ND = Not detected.

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

 Aaron Cassels
 Quality Control Coordinator

 October 28, 2019

Date