



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

1.800.665.HEMP
www.manitobaharvest.com

CERTIFICATE OF ANALYSIS

| | |
|----------------------|---|
| Product: | Broad Spectrum Hemp Extract Spray – Peppermint |
| Lot No: | 190821 |
| Source Lot No: | E19014-1 |
| SKU#: | 6121 |
| Date of Manufacture: | May 10, 2019 |
| Best Before Date: | May 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) | 10.52 mg/mL | 8-12 mg/mL | HPLC (LOQ <50 ppm) |
| CBD | 1.11 wt. % | Report only | HPLC (LOQ <50 ppm) |
| CBDA | ND | Report only | HPLC (LOQ <50 ppm) |
| CBC | 0.057 wt. % | Report only | HPLC (LOQ <50 ppm) |
| CBCA | ND | Report only | HPLC (LOQ <50 ppm) |
| CBG | ND | Report only | HPLC (LOQ <50 ppm) |
| CBGA | ND | Report only | HPLC (LOQ <50 ppm) |
| CBN | ND | Report only | HPLC (LOQ <50 ppm) |
| Δ9 THC (total) | ND | < 0.01% | Calculated |
| Δ9 THC | ND | Report only | HPLC (LOQ <50 ppm) |
| THCA | ND | Report only | HPLC (LOQ <50 ppm) |
| TERPENES | | | |
| Total Terpenes | 0.3 wt.% | Report only | GC-MS |
| (-)-alpha-Bisabolol | 15mg/100g | Report only | GC-MS |
| Camphene | <1.0mg/100g | Report only | GC-MS |
| (1S)-(+)-3-Carene | <1.0mg/100g | Report only | GC-MS |
| beta-Caryophyllene | 64mg/100g | Report only | GC-MS |
| p-Cymene | 2.9mg/100g | Report only | GC-MS |



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|--------------------------------------|-------------|--------------------|---------------|
| Eucalyptol | 84mg/100g | <i>Report only</i> | GC-MS |
| alpha-Humulene (alpha-Caryophyllene) | 3.3mg/100g | <i>Report only</i> | GC-MS |
| (-)-Isopulegol | <1.0mg/100g | <i>Report only</i> | GC-MS |
| (R)-(+)-Limonene | 42mg/100g | <i>Report only</i> | GC-MS |
| Linalool | 3.4mg/100g | <i>Report only</i> | GC-MS |
| beta-Myrcene | 5.1mg/100g | <i>Report only</i> | GC-MS |
| (E)-b-Ocimene | 0.80mg/100g | <i>Report only</i> | GC-MS |
| (Z)-b-Ocimene | 2.6mg/100g | <i>Report only</i> | GC-MS |
| alpha-Pinene | 12mg/100g | <i>Report only</i> | GC-MS |
| beta-Pinene | 16mg/100g | <i>Report only</i> | GC-MS |
| alpha-Terpinene | 6.2mg/100g | <i>Report only</i> | GC-MS |
| gamma-Terpinene | 8.6mg/100g | <i>Report only</i> | GC-MS |
| Terpinolene | 3.0mg/100g | <i>Report only</i> | GC-MS |
| 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 | FDA BAM ch.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 | <0.500 ppb | < 20 ppb | UHPLC-MS/MS |
| Aflatoxin B2 | <0.500 ppb | < 20 ppb | UHPLC-MS/MS |
| Aflatoxin G1 | <0.500 ppb | < 20 ppb | UHPLC-MS/MS |
| Aflatoxin G2 | <0.500 ppb | < 20 ppb | UHPLC-MS/MS |
| Aflatoxin M1 | <0.500 ppb | < 20 ppb | UHPLC-MS/MS |
| Aflatoxin M2 | <0.500 ppb | < 20 ppb | UHPLC-MS/MS |
| Deoxynivalenol | <100 ppb | <i>Report only</i> | UHPLC-MS/MS |
| T-2 Toxin | <10.0 ppb | <i>Report only</i> | UHPLC-MS/MS |
| HT-2 Toxin | <100 ppb | <i>Report only</i> | UHPLC-MS/MS |
| Fumonisin B1 | <25.0 ppb | <i>Report only</i> | UHPLC-MS/MS |
| Fumonisin B2 | <25.0 ppb | <i>Report only</i> | UHPLC-MS/MS |



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| | | | |
|------------------------|------------|--------------------|---------------------------|
| Ochratoxin A | <1.00 ppb | <i>Report only</i> | UHPLC-MS/MS |
| Zearalenone | <30.0 ppb | <i>Report only</i> | UHPLC-MS/MS |
| CHEMICAL | | | |
| Residual Solvents | ND | No detection | USP <467> |
| Pesticides | ND | No detection | LC/MS/MS; AOAC 2007.01 |
| Lead | < 0.05 ppm | < 0.5 ppm | AOAC 993.14 |
| Arsenic | < 0.1 ppm | < 0.2 ppm | |
| Cadmium | < 0.05 ppm | < 0.1 ppm | |
| Mercury | < 0.05 ppm | < 0.1 ppm | |
| Gluten | < 3 ppm | < 20 ppm | AOAC 991.19 |
| ORGANOLEPTIC | | | |
| Appearance | Conforms | Liquid | Visual |
| Color | Conforms | Yellow to Amber | Visual |
| Odor | Conforms | Mint | Olfactory |
| PHYSICAL DOSAGE | | | |
| Fill Volume | 35 ml | ≥ 30 ml | QCU-90-005 |
| Density | 0.96 g/ml | 0.96-0.98 g/ml | AP-CHE-015 |
| Discharges | 240 | 240 | Internal method |

* ND = Not detected.

Aaron Cassels
 Quality Control Coordinator

August 29, 2019
 Date