



3-2700 St. Clair Ave West
 Toronto, ON M6N 1M2
 Phone: 416-766-1254
 Fax: 647-930-9525
 Email: contactus@plantpower.ca

Certificate of Analysis

Product: Peppermint Oil
 Botanical name: *Mentha x piperita*
 Origin: India
 Lot number: ME PIP-1710079
 Issuing date: 01-JUL-2017
 Expiration date: 01-JUL-2020

| Parameters | Specification | Results |
|---|--|----------|
| Colour | Colorless to Pale yellow or Pale greenish-yellow clear liquid | Conforms |
| Odour | Characteristic; Peppermint odour and taste followed by sensation of cold | Conforms |
| Solubility | Miscible of Alcohol & Methylene chloride | Conforms |
| Specific gravity (g/cm ³) at 20°C | 0.900 – 0.916 | 0.90118 |
| Refractive index at 20°C | 1.457 – 1.467 | 1.4594 |
| Optical rotation at 20°C | -18° to 35° | -30.669° |
| Acidity | Neutral | Conforms |
| Fatty Oil and Resinified Essential Oils | It complies with the test for fatty oils and resinified essential oils | Complies |
| Limit of dimethyl sulphide | As per USP | Complies |
| Heavy Metals | 20 µg per g | Comforms |
| Residual Solvents | As per USP | Conforms |

| Parameters | Specification | Results |
|---|-----------------|---------|
| Chromatographic Profile | | |
| Limonene | 1.00% - 5.00% | 2.04% |
| 1,8 Cineole | 3.50% - 14.00% | 4.26% |
| Menthone | 14.00% - 32.00% | 20.28% |
| Menthofuran | 1.00% - 9.00% | 1.25% |
| Iso - Menthone | 1.50% - 10.00% | 2.89% |
| Menthyl Acetate | 2.80% - 10.00% | 4.59% |
| Iso - Pulegol | Max. 0.20% | 0.08% |
| L - Menthol | 30.00% - 55.00% | 53.27% |
| Pulegone | Max. 4.00% | 0.52% |
| Carvone | Max. 1.00% | 0.10% |
| The ratio of 1,8 cineole content to limonene content is minimum 2 | | 2.08:1 |

Storage: Keep in tightly closed container in a cool and dry place, protected from light.

This is a computer generated certificate of analysis and does not require a signature.