



TROPICAL BIOESSENCE SDN. BHD.

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CERTIFICATE OF ANALYSIS

Product : Patchouli Essential oil
Botanical name : Pogestemon cablin leaf Oil (Origin Malaysia)
Product Code : PCEO 01
Mfg Date : May 2025 Exp Date : May 2028 Batch no: 052535B
Method : Steam Distillation

| TEST | RESULT | STANDARD |
|---------------------------------------|------------------------|--------------------------------|
| Appearance | Yellow to orange-brown | Confirm |
| Odour | Woody, earthy | Confirm |
| Refractive index (25°C) | 1.508 | 1.505 – 1.515 |
| Specific gravity (25°C) | 0.959 | 0.952 – 0.975 |
| Optical Rotation | -45.7° | -60.0° - 45.0° |
| Solubility | Complies | Soluble in Alcohol |
| Heavy Metals Content | | |
| Arsenic (mg/kg) | N.D (<0.1ppm) | BP 2013, Appendix IID, ICP-AES |
| Lead (mg/kg) | N.D (<0.5ppm) | BP 2013, Appendix IID, ICP-AES |
| Cadmium (mg/kg) | N.D (<0.1ppm) | BP 2013, Appendix IID, ICP-AES |
| Mercury (mg/kg) | N.D (<0.1ppm) | BP 2013, Appendix IID, ICP-AES |
| Microbial Content | | |
| <i>Pseudomonas aeruginosa</i> | Absent in 1g | BP 2013, Appendix XVIB, 1 |
| <i>Staphylococcus aureus</i> | Absent in 1g | BP 2013, Appendix XVIB, 1 |
| <i>Total Combined Yeast and Mould</i> | ND(<10) CFU/g | BP 2013, Appendix XVIB, 2 |
| <i>Total Aerobic Microbial Count</i> | ND(<10) CFU/g | BP 2013, Appendix XVIB, 2 |
| Assay by GC | | |
| Pathcoulol | 30.10% | 27.0 - 36.0% |
| α-Bulnesene | 19.69% | 3.0 - 22.0% |
| α-Guaiene | 13.89% | 4.0 - 20.0% |
| α-Patchuolene | 7.52% | 1.0 - 12.0% |
| α-Seychellene | 5.99% | 2.0 - 7.0% |
| b-Caryophyllene | 3.23% | 1.5 - 5.0% |
| b-Patchuolene | 2.79% | 2.0 - 8.0% |
| Pogostol | 2.12% | 1.5 - 5.0% |
| Nor-Patchoulenol | 0.59% | 0.5 - 3.0% |

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