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TROPICAL BIOESSENCE SDN. BHD.

CERTIFICATE OF ANALYSIS

Product : Citronella Essential oil
Botanical name : Cymbopogon nardus (Origin Malaysia)
Product Code : CTREO 01
Mfg Date : May 2025 Exp Date : May 2028 Batch no: 052549B
Method : Steam Distillation

TEST	RESULT	STANDARD
Appearance	Pale Yellow to Brownish	Confirm
Odour	Sweet, fresh, warm	Confirm
Refractive index (25°C)	1.468	1.4600 - 1.4735
Specific gravity (25°C)	0.882	0.880 - 0.900
Optical Rotation	-2.5°	-8.0° - +2.0°
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		
Citronella	36.00%	32.00 - 45.00%
Citronellol	21.00%	11.00 - 25.00%
Limonene	2.30%	1.00 - 4.00%

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