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TROPICAL BIOESSENCE SDN. BHD.

CERTIFICATE OF ANALYSIS

Product : Frankincense Essential oil
Botanical name : Boswellia carterii Resin Oil (Origin Somalia)
Product Code : FKEO 01
Mfg Date : May 2025 Exp Date : May 2028 Batch no: 052538B
Method : Steam Distillation

TEST	RESULT	STANDARD
Appearance	Colourless to Pale Yellow Liquid	Confirm
Odour	Fresh, warm, resinous, coniferous	Confirm
Refractive index (25°C)	1.471	1.465 - 1.482
Specific gravity (25°C)	0.873	0.850 - 0.890
Optical Rotation	-1.6°	-25.0° - -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		
α-Pinene	65.00%	25.0 - 45.0%
Sabinene	5.90%	3.0 - 12.0%
β-pinene	2.50%	4.0 - 8.0%
Limonene	5.00%	2.0 - 8.0%
Camphene	3.10%	1.5 - 5.0%
Myrcene	2.10%	1.0 - 3.5%
P-Cymene-ol	1.05%	1.0 - 5.0%

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