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TROPICAL BIOESSENCE SDN. BHD.

CERTIFICATE OF ANALYSIS

Product : Fennel Sweet Essential oil
Botanical name : Foeniculum Vulgare Dulce (Fennel) Seed Oil
Product Code : FSEO 01
Mfg Date : May 2025 Exp Date : May 2028 Batch no: 052553B
Method : Steam Distillation

Appearance : Colorless to pale yellow liquid
Odour : Sweet, anise/licorice-like, slightly camphoraceous aroma
Refractive index (20°C) : 1.536
Specific gravity (20°C) : 0.955
Optical Rotation : 14.7°
Solubility : Soluble in Alcohol and Fixed Oil, Insoluble in Water

TEST	RESULT	STANDARD
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		
Trans Anethole	73.88%	
Limonene	9.01%	
α-pinene	8.26%	
Estragole	3.66%	

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