



TROPICAL BIOESSENCE SDN. BHD.

No ST 519, Jalan Tunas Baru,
Seksyen 1/4, Kawasan MIEL
Masjid Tanah Phase 1,
78300 Masjid Tanah Melaka
Tel: +606-3842800, Fax: +606-3842900
email: admin@tropical bioessence.com.my

CERTIFICATE OF ANALYSIS

Product : Geranium Essential oil
Botanical name : Pelargonium graveolens Leaves and Flower (Origin Egypt)
Product Code : GREO 01
Mfg Date : May 2025 Exp Date : May 2028 Batch no: 052530B
Method : Steam Distillation

TEST	RESULT	STANDARD
Appearance	Light Yellow Colour to Greenish Yellow	Confirm
Odour	Characteristic sweet odour resembling Rose	Confirm
Refractive index (25°C)	1.464	1.455 - 1.485
Specific gravity (25°C)	0.878	0.865 - 0.895
Optical Rotation	-12.0°	-14.0° - -8.0°
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		
Citronellol	33.00%	30.0 - 45.0%
Geraniol	15.00%	10.0 - 20.0%
Citronellyl formate	8.50%	5.0 - 10.0%
Isomenthone	6.00%	5.0 - 10.0%

The information in this Certificate Of Analysis is, to the best of our knowledge, information and belief, correct and consistent with the state of technical information available at the date of its publication. Tropical Bioessence Sdn. Bhd. cannot however accept liability for any loss, injury and/or damage that results from use or misuse of the information herein. This document remains the property of Tropical Bioessence Sdn. Bhd. and should not be copied or distributed without written authority.