

CERTIFICATE OF ANALYSIS

Fill Date: 25/01/2018

Expiry Date: 25/01/2023

SAMPLE	Tea Tree Oil
CUSTOMER	Cassegrain Tea Tree Oil Pty Ltd
CERTIFICATION DATE	09 August 2017
CUSTOMER LOT/BATCH No.	Vat#20310717
LABORATORY REFERENCE	ARL173822
JOB No.	A171514

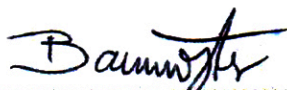
TEST	ISO 4730:2017(E) SPECIFICATION	RESULTS	TEST METHOD
Appearance	Clear, mobile without visible water	Conforms	ARL-TM266-3
Colour	Colourless to pale yellow	Conforms	
Odour	Characteristic	Conforms	
Relative Density @ 20°C	0.885 – 0.906	0.893	Ph.Eur.2.2.5
Refractive Index @ 20°C	1.475 – 1.482	1.4784	Ph.Eur.2.2.6
Optical Rotation @ 20°C	+7° - +12°	+10.03°	Ph.Eur.2.2.7
Miscibility in ethanol	< 2 volumes	0.80	ISO875

TEST	ISO 4730:2017(E)** SPECIFICATION	RESULTS	TEST METHOD
	Area %		
α-pinene	1.0 – 4.0	2.44	ARL-TM101-3*
sabinene	tr – 3.5	0.45	
α-terpinene	6.0 – 12.0	10.06	
limonene	0.5 – 1.5	0.90	
p-cymene	0.5 – 8.0	1.72	
1,8-cineole	tr – 10.0	2.42	
γ-terpinene	14.0 – 28.0	20.97	
α-terpinolene	1.5 – 5.0	3.51	
terpinen-4-ol	35.0 – 48.0	40.33	
α-terpineol	2.0 - 5.0	2.93	
aromadendrene	0.2 – 3.0	1.21	
ledene	0.1 – 3.0	0.95	
δ-cadinene	0.2 – 3.0	1.14	
globulol	tr – 1.0	0.18	
viridiflorol	tr – 1.0	0.13	

* Assay by GC (FID detection)

** ISO4730:2017(E)-Essential Oil of Melaleuca, terpinen-4-ol type (Tea Tree Oil)

tr - denotes trace



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MR BENDRIK BAUMEISTER
ANALYTICAL OFFICER



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MR ASHLEY DOWELL
MANAGER - ARL