



Sharp and Howells Pty Ltd

CHEMICAL LABORATORIES

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TEST REPORT NO.: 20 – 0096

Report Date: 1st April 2020

Client: Integrity Testing Pty Ltd

Address: PO Box 1299
BENDIGO Vic 3552

Attention To: David Tongue; Brian Mulroney

By Email: bmulroney@integritytesting.com.au
djtongue@integritytesting.com.au

Sample(s): 1 of "Tea Tree" Oil

Date Received: 19th March 2020

Sampled By: Client

Lab Number(s): 20/A/0368

Analysis: *Composition (Gas Chromatography/Mass spectrometry
FTIR (Fourier Transform Infrared) & Refractive Index*

Notes:

This laboratory was not involved with, consulted, or requested to undertake sampling of the specimens provided, and testing of those test specimens has been conducted as received in the laboratory.

Accordingly, no responsibility is taken for the integrity, authenticity, appropriateness, or representativeness, of any of the test specimens provided and this must be taken into account when reviewing, comparing or checking the test results published in this report. Unless otherwise notified, all samples will be disposed of in three months from reporting date.

Yours faithfully,
Sharp and Howells Pty. Ltd.

Maria Zaksek
BSc, C.Chem., MRACI
Senior Chemist

Michael Wright
D.App. Sc (App Chem.) C.Chem.MRACI
Technical Manager

INTRODUCTION:

We were provided with a sample marked "Tea Tree" oil to determine the composition and Refractive Index.


METHODOLOGY:

The sample was analysed directly using a Perkin Elmer Spectrum 100 Fourier Transform Infrared (FTIR) Spectrometer with ATR (Attenuated Reflectance Accessory).

The sample was also analysed directly by Gas Chromatography/Mass Spectrometry using a Perkin Elmer Clarus 680/600S.

Refractive Index was conducted using an Atago Illuminator Refractometer.

RESULTS OF ANALYSIS:

Lab Number:	20/A/0368
Sample Marked:	"Tea Tree" 
Sample Appearance:	Light amber coloured liquid
Refractive Index @ 20°C:	1.463

RESULTS OF ANALYSIS: (Continued)

Gas Chromatography/ Mass Spectrometry Analysis: (Major Components)

The samples were diluted with Ethanol and then analysed directly by GC/MS:

Lab Number:	20/A/0368
Sample Marked:	"Tea Tree"
B-Thujene:	0.2
α -Pinene:	5.8
Camphene:	0.1
β -Pinene:	1.3
β -Myrcene:	2.0
α -Terpinene:	0.8
p-Cymene:	2.3
D-Limonene:	9.3
γ -Terpinene:	2.4
Terpinolene:	0.4
Linalool:	0.1
Terpinen-4-ol:	6.1
α - Terpineol:	13.0
Aromandendrene:	0.9
Ledene:	0.7
β -Cadinene:	0.6
Globulol:	0.5
Eucalyptol:	53.2

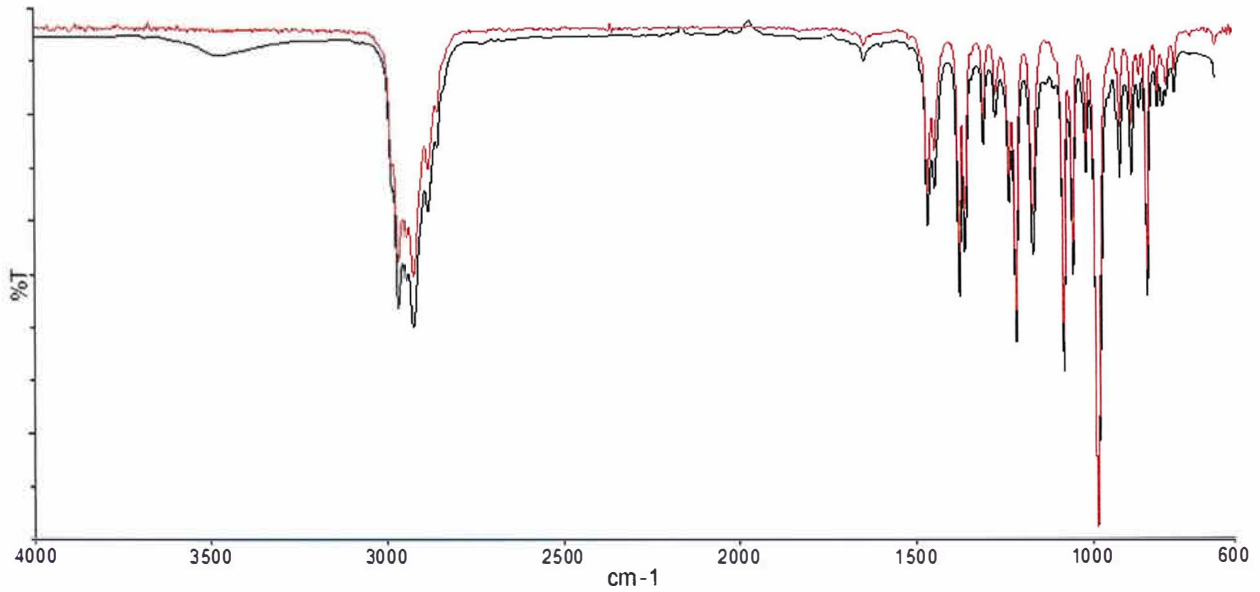
NOTE:

These results show the best matches according to comparison against current databases and available information. All efforts have been made to ensure that our databases are up to date and reflective of current knowledge and technology.

Further or absolute confirmation would require reference materials being available for additional testing.

RESULTS OF ANALYSIS: (Continued)

Fourier Transform Infrared (FTIR):



BLACK – "Tea Tree" oil (20/A/0368)

RED – Eucalyptus Oil (Reference)

Comment: Probability it is Tea tree oil "*Maleleuca Linariifolia*" or Summer Snow"