



PLANT THERAPY

100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: T30102

ESSENTIAL OIL: TEA TREE ORGANIC

BOTANICAL NAME: MELALEUCA ALTERNIFOLIA ORGANIC

ORIGIN: AUSTRALIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF ORGANIC TEA TREE OIL	%
TERPINEN-4-OL	39.5
γ -TERPINENE	21.4
α -TERPINENE	10.2
TERPINOLENE	4.1
1,8-CINEOLE + β -PHELLANDRENE	3.4
α -PINENE + α -THUJENE	3.4
α -TERPINEOL	2.6
p-CYMENE	1.8
AROMADENDRENE	1.3
δ -CADINENE	1.3
LEDENE (VIRIDIFLORENE)	1.0
LIMONENE	0.9
SABINENE	0.2
GLOBULOL	0.2
VIRIDIFLOROL	0.1

Comments from Robert Tisserand: This is an excellent tea tree oil, and it conforms to the ISO standard for Australian Tea Tree Oil.

CUSTOMER :

PLANT THERAPY
126 Locust Street South
Twin Falls, ID 83 301
USA

Sample nature : ESSENTIAL OIL
Botanical species : MELALEUCA ALTERNIFOLIA ORGANIC
Reference name : TEA TREE ORGANIC
Batch number : T30102
Origin : AUSTRALIA
Plant part: LEAF
Pyrenessences reference : E350
Date of reception : 07/21/2015
Date of analysis : 08/01/2015
Packaging : Amber flask of 4 ml - ambient temperature
Analysis : Classic analysis

Validated report by : Daniel Dantin



GAS CHROMATOGRAPHY norm NF ISO 11024

Analysis conditions :

CPG 6890 / MS 5973 – Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

CPG 6890 FID - Column : HP VF WAX polar 60 m × 0,25 mm × 0,5 µm

Temperature program : 6 mn to 60 °C -2 °C/mn → 250 °C - 20mn to 250 °C

Carrier gas He : 23 psis/MS – 30 psis/FID

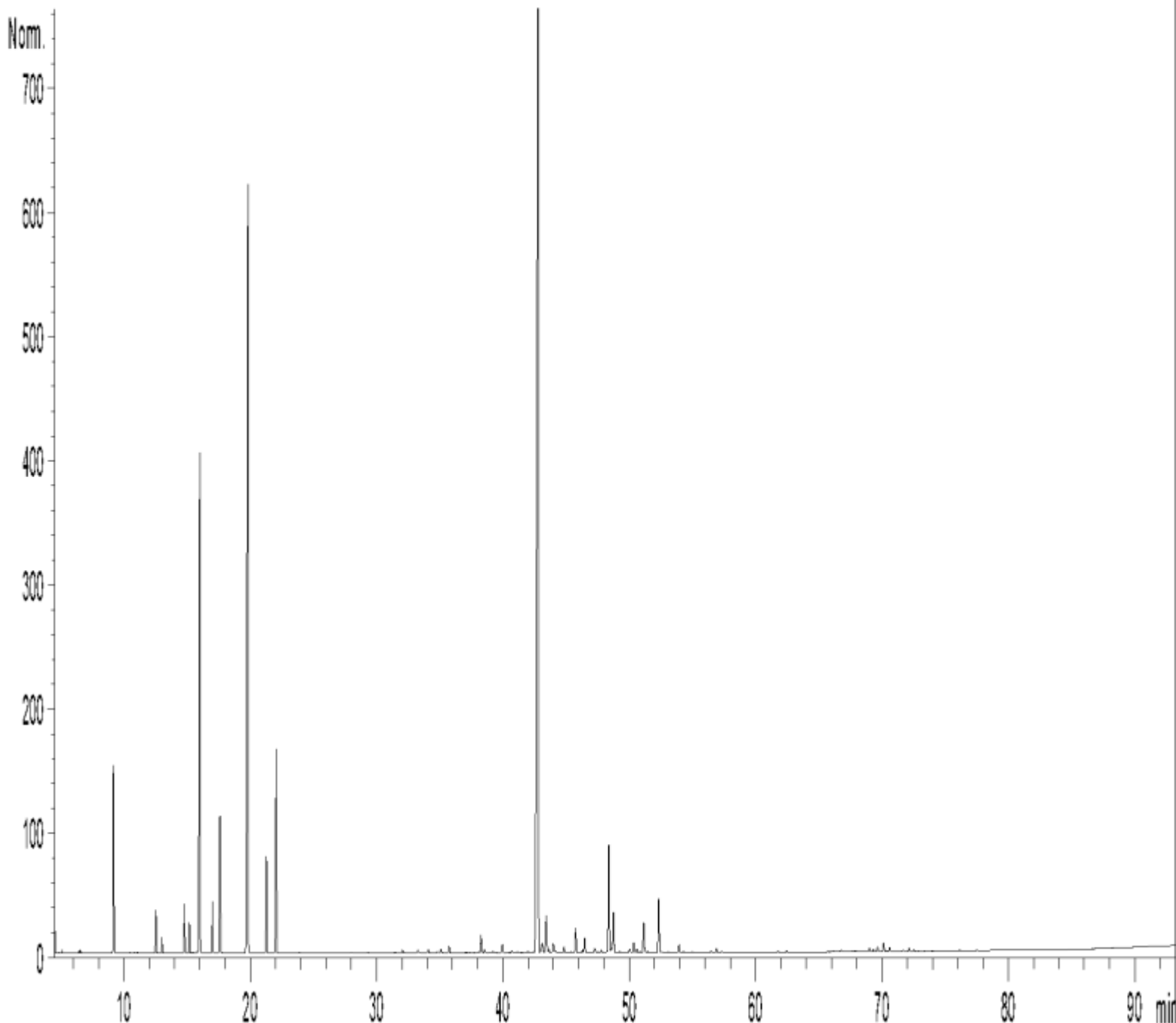
Sample injection / split : 1 µl of 10 % solution in hexane,

Mass range : 30 to 350, Oil components are identified by a combination of retention times (our own database) and mass spectra library NKS 75 000 records,

Percentages are calculated from GC/FID peaks areas without using corrections factors,

Chromatographic profile (GC/FID)

FID1 A: (Z:\PLANTHER\MA15E350.D)



Identification results 1 : TEA TREE ORGANIC BATCH T30102

Peak	RT (min)	Compound name	%	Norm	Allergens (%)
1	5,2	ACETONE	0,03		
2	6,5	BUTANAL, 2-METHYL-	0,02		
3	6,7	ETHANOL	0,03		
4	9,2	α-PINENE + α-THUYENE	3,38	1 - 6	
5	10,5	α-FENCHENE + p-MENTH-3-ENE	0,01		
6	10,8	CAMPHENE	0,01		
7	12,5	β-PINENE	0,70		
8	13,0	SABINENE	0,24	Tr. - 3,5	
9	14,8	β-MYRCENE	0,82		
10	15,2	α-PHELLANDRENE	0,53		
11	15,4	ψ-LIMONENE	0,01		
12	15,8	1,4-CINEOLE	0,03		
13	16,0	α-TERPINENE	10,16	5 - 13	
14	17,0	LIMONENE	0,90	0,5 - 15	0,90
15	17,6	1,8-CINEOLE + β-PHELLANDRENE	3,44	Tr. - 15	
16	18,7	Cis-β-OCIMENE	0,01		
17	19,8	γ-TERPINENE	21,42	10 - 28	
18	21,2	p-CYMENE	1,83	0,5 - 8	
19	22,0	TERPINOLENE	4,12	1,5 - 5	
20	23,8	Cis-3-HEXENYL ACETATE	0,01		
21	28,0	3-HEXEN-1-OL	0,02		
22	29,3	MENTHATRIENIC COMPONENT ISOMER	0,01		
23	31,5	MENTHATRIENIC COMPONENT ISOMER	0,01		
24	32,0	α-p-DIMETHYLSTYRENE	0,07		
25	32,2	MENTHATRIENIC COMPONENT ISOMER	0,01		
26	33,3	α-CUBEBENE	0,07		
27	33,4	TERPINOLENE, 4,8-EPOXY-	0,02		
28	34,1	SESQUITERPENE	0,07		
29	34,8	BICYCLOELEMENE	0,03		
30	35,1	ARISTOLENE ISOMER	0,08		
31	35,7	α-COPAENE	0,15		
32	38,0	GURJUNENE ISOMER	0,03		
33	38,2	α-GURJUNENE	0,40		
34	38,5	LINALOOL	0,07		0,07
35	38,9	SESQUITERPENE	0,02		
36	39,2	β-MAALIENE	0,04		
37	39,9	Trans-p-MENTH-2-EN-1-OL	0,18		
38	40,7	TERPINENE-1-OL	0,04		
39	41,1	SESQUITERPENE	0,03		
40	41,3	ARISTOLENE ISOMER	0,02		
41	41,9	SESQUITERPENE	0,03		
42	42,4	β-ELEMENE	0,04		
43	42,8	TERPINENE-4-OL	39,48	30 - 48	
44	43,1	β-CARYOPHYLLENE	0,37		
45	43,4	SESQUITERPENE	0,07		

Identification results 2 : TEA TREE ORGANIC BATCH T30102

Peak	RT (min)	Compound name	%	Norm	Allergens (%)
46	43,4	AROMADENDRENE	1,27	Tr. - 3	
47	43,9	COPACAMPHENE	0,28		
48	44,1	SESQUITERPENE	0,04		
49	44,8	CADINA-3,5-DIENE	0,14		
50	45,4	SESQUITERPENE	0,03		
51	45,7	ALLO-AROMADENDRENE	0,58		
52	46,2	SESQUITERPENE	0,06		
53	46,5	ZONARENE	0,34		
54	46,8	δ-TERPINEOL	0,01		
55	47,2	α-HUMULENE	0,15		
56	47,4	γ-SELINENE	0,03		
57	47,7	NERAL	0,05		0,05
58	48,0	4,5-di-epi-ARISTOLOCHENE	0,02		
59	48,2	γ-MUUROLENE	0,03		
60	48,4	α-TERPINEOL	2,63	1,5 - 8	
61	48,6	SESQUITERPENE	0,11		
62	48,7	LEDENE	0,97	Tr. - 3	
63	49,2	SESQUITERPENE	0,03		
64	50,0	CUBEBENE ISOMER	0,05		
65	50,1	GERMACRENE D	0,03		
66	50,3	α-MUUROLENE + β-SELINENE	0,24		
67	50,6	α-SELINENE	0,08		
68	50,8	SESQUITERPENE	0,04		
69	51,1	BICYCLOGERMACRENE	0,81		
70	51,4	Trans-PIPERITOL	0,04		
71	52,3	δ-CADINENE	1,26	Tr. - 3	
72	52,5	γ-CADINENE	0,10		
73	53,1	SESQUITERPENE Mw=202	0,02		
74	53,5	SESQUITERPENE Mw=202	0,01		
75	53,9	CADINA-1,4-DIENE	0,18		
76	54,3	NEROL + MYRTENOL	0,02		
77	55,0	SESQUITERPENE Mw=202	0,01		
78	56,5	GERANIOL	0,03		0,03
79	56,9	CALAMENENE	0,10		
80	57,3	p-CYMENE-8-OL	0,03		
81	61,7	α-CALACORENE	0,01		
82	62,4	PALUSTROL	0,02		
83	66,1	METHYLEUGENOL	0,02		
84	66,3	SESQUITERPENOL	0,03		
85	66,7	Épi-GLOBULOL	0,06		
86	67,6	LEDOL	0,02		
87	67,8	GLEENOL ISOMER	0,03		
88	69,0	GLEENOL	0,08		
89	69,3	EPI-CUBENOL	0,06		
90	69,6	CUBENOL	0,12		

Identification results 3 : TEA TREE ORGANIC BATCH T30102

Peak	RT (min)	Compound name	%	Norm	Allergens (%)
91	70,1	GLOBULOL	0,21	Tr. - 1	
92	70,3	CYCLOOCTANONE	0,02		
93	70,6	VIRIDIFLOROL	0,10	Tr. - 1	
94	71,6	10-épi-γ-EUDES MOL	0,05		
95	72,1	ROSIFOLIOL	0,09		
96	72,5	SPATHULENOL	0,05		
97	75,6	CADINOL ISOMER	0,01		
98	76,1	CARVACROL	0,02		
99	77,5	ISOSPATHULENOL	0,02		
		TOTAL	99,90		1,05