

Customer :

**LearningAboutEOs.com
NourishingTreasures.com**

Sample nature : ESSENTIAL OIL
Botanical name : MELALEUCA ALTERNIFOLIA
Reference name : TEATREE
Batch number : 8
Origin :
Part: LEAF
Pyrenessences reference : 8556

Date of reception : 03/07/2013 **Date analysis :** 13/07/2013
Packaging : Brown flask of 10 ml - ambient temperature
Wanted analysis : Complete analysis
Shelf life in our laboratory 1 an

Comments and Conclusions :

- **Not characteristic Tea Tree profile**
- **% of limonene too high :**

**⇒ BATCH NOT IN COMPLIANCE WITH THE NORM OF MELAEUCA
TERPINENE-4-OL ESSENTIAL OIL: NF ISO 4730**

Report validated by :

Daniel Dantin



ORGANOLEPTICS CHARACTERISTICS (method I-ANA-008-B*)

Aspect : Limpid Liquide

Color : Pale yellow

Odour : Aromatic, not characteristic

PHYSICALS CHARACTERISTICS

	METHOD	EO TEA TREE BATCH N° 8	NORM NF ISO 4730	
			Minimum	Maximum
Specific gravity 20 °C	I-ANA-003-A*	0,896	0,885	0,906
Specific gravity 15 °C	I-ANA-003-A*	0,900		
Refractive index 20°C	NF ISO 280	1,476 6	1,475 0	1,482 0
Optical rotation 20°C	NF ISO 592	+ 7 °	+ 5 °	+ 15 °
Miscibility in éthanol 85 %	NF ISO 875	1,1 volumes of alcohol 80 %	< 2 volumes alcohol 85 %	
Flash point : SETAFLASH	FD ISO/TR 11018	60 °C	59 °C	

- Interns Methods

GAS CHROMATOGRAPHY (norm NF ISO 11024)

Conditions :

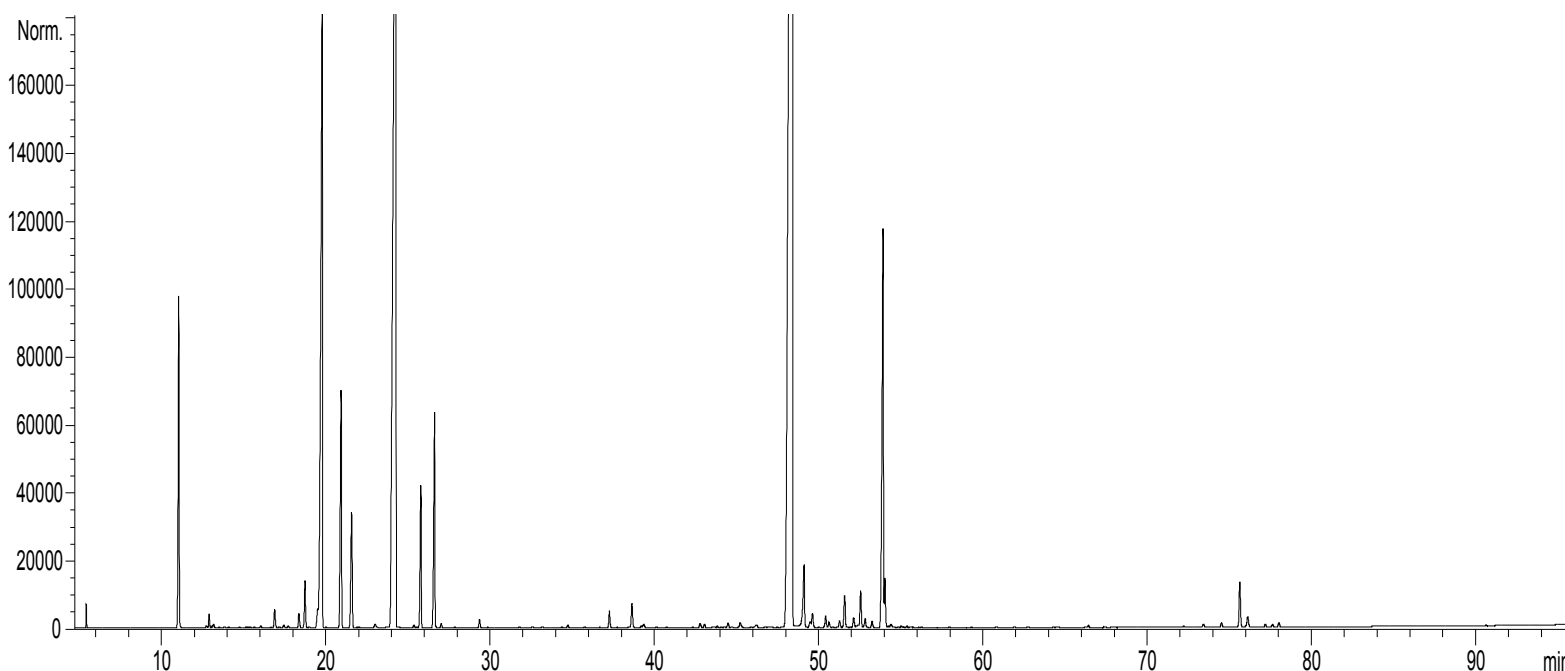
- CPG/SM and CPG/FID (GC : 5890 - SM : 5970 HEWLETT PACKARD)
- Column : HP INNOWAX polar : 60 m × 0,25 mm × 0,5 µm
- Programmation : 6 min to 60°C – 2°C/min→250°C – 10 min to 250°C
- Carrier gas : He 30 psi/FID ; 23 psi/MS
- Dilution: 10 % in Hexane
- Mass : 30 à 350
- Sample injection : 1 µL

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

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

Chromatographic profile (GC/FID) :

FID1 A, (HARRIS\MA88556.D)



Identification results 1 – TEA TREE BATCH N° 8

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)	Fonction
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1	5,4	ACETONE	0,10			CA
2	11,0	α-PINENE	3,20	1,0 – 6,0		M
3	12,7	MENTHENE ISOMER	0,02			ALCE
4	12,9	p-MENTH-3-ENE	0,13			ALCE
5	13,2	CAMPHENE	0,05			M
6	13,8	ALKENE ISOMER	0,01			ALKE
7	16,0	SABINENE	0,02	Tr – 3,5		M
8	16,9	p-MENTH-2-ENE	0,22			ALCE
9	17,5	MENTHENE ISOMER	0,03			ALCE
10	17,7	Δ3-CARENE	0,02			M
11	18,3	β-MYRCENE	0,15			M
12	18,7	α-PHELLANDRENE	0,52			M
13	19,0	ψ-LIMONENE	0,01			M
14	19,4	1,4-CINEOLE	0,23			O
15	19,8	α-TERPINENE	10,05	5,0 – 13,0		M
16	20,9	LIMONENE	2,73	0,5 – 1,5	2,73	M
17	21,5	1,8-CINEOLE	1,40	Tr – 15,0		M
18	23,0	Cis-β-OCIMENE	0,05			M
19	24,3	γ-TERPINENE	24,20	10,0 – 28,0		M
20	25,4	3,8-p-MENTHADIENE	0,03			ALCE
21	25,8	p-CYMENE	1,50	0,5 – 8,0		M
22	26,6	TERPINOLENE	2,47	1,5 – 5,0		M
23	27,0	TERPINOLENE ISOMER	0,04			M
24	29,4	TERPENIC COMPOUND	0,10			CT
25	32,6	ALLO-OCIMENE	0,01			M
26	33,2	3-HEXEN-1-OL	0,01			OLA
27	34,4	MENTHATRIENIC COMPOUND	0,01			M
28	34,7	FENCHONE	0,03			CT
29	35,8	PERILLENE	0,01			CF
30	37,2	α-p-DIMETHYLSTYRENE	0,08			M
31	37,3	LINALOOL cis-OXIDE	0,12			O
32	37,4	MENTHATRIENIC COMPOUND	0,01			M
33	38,4	α-CUBEBENE	0,01			S
34	38,6	Trans-THUYANOL	0,29			OLT
35	39,2	LINALOOL trans-OXIDE	0,02			O
36	39,3	FENCHYL ACETATE	0,05			ET
37	40,0	BICYCLOELEMENE	0,01			S
38	40,4	ISOLEDENE	0,01			S
39	42,8	DILL ETHER	0,06			E
40	43,0	PINOCAMPHONE	0,04			CT
41	43,6	α-GURJUNENE	0,02			S
42	43,7	LINALOOL	0,01		0,01	OLA
43	44,3	Cis-THUYANOL	0,01			OLT
44	44,5	HYDROXY TERPENE COMPOUND	0,05			COX
45	44,7	ALIPHATIC ESTER	0,01			EA

Identification results 2 – TEA TREE BATCH N° 8

SARL PYRENESSENCES ANALYSES - 2, chemin de la plaine - 11340 Belcaire, FRANCE

TEL: +33 (0)4 68 31 77 83 - Courriel : analyses@pyrenessences.com

SIRET 511 930 869 00017 - Code APE 7490B

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)	Fonction
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46	45,3	DIHYDROTERPENOL	0,08			OLT
47	46,2	ISOPULEGOL	0,05			OLT
48	48,5	TERPINENE-4-OL	41,57	30,0 – 48,0		OLT
49	48,7	β-CARYOPHYLLENE	0,03			S
50	49,0	AROMADENDRENE ISOMER	0,47			S
51	49,2	AROMADENDRENE	0,55	Tr – 3,0		S
52	49,5	SESQUITERPENE	0,08			S
53	49,6	Cis-p-MENTH-2-EN-1-OL	0,19			OLT
54	50,0	Cis-β-TERPINEOL	0,01			OLT
55	50,4	CADINA-3,5-DIENE	0,15			S
56	50,6	SESQUITERPENE	0,07			S
57	51,3	ALLO-AROMADENDRENE	0,08			S
58	51,6	Trans-PINOCARVEOL	0,42			OLT
59	52,1	ISOBORNEOL	0,12			OLT
60	52,6	ESTRAGOLE	0,48			PE
61	52,8	α-HUMULENE	0,11			S
62	53,2	NERAL	0,08		0,08	ALD
63	53,7	γ-MUUROLENE	0,01			S
64	53,8	α-TERPINEOL	5,65	1,5 – 8,0		OLT
65	53,9	TERPENYL ACETATE	0,48			ET
66	54,2	LEDENE	0,02	Tr – 3,0		S
67	54,4	BORNEOL	0,05			OLT
68	55,2	2-PROPENAL-2-METHYL-3-PHENYL	0,02			ALD
69	55,4	ALKYL COMPOUND	0,02			ALCA
70	60,8	SESQUITERPENE	0,01			S
71	62,0	Trans-CARVEOL	0,01			OLT
72	62,8	p-CYMENE-8-OL	0,01			OLAR
73	66,4	ALIPHATIC ESTER	0,03			EA
74	72,2	SESQUITERPENOL	0,02			SOLC
75	73,4	LEDOL	0,04			SOLC
76	74,5	GLEENOL	0,06			SOLC
77	75,4	ELEMOL	0,01			SOLC
78	75,6	GLOBULOL	0,58	Tr – 1,0		SOLC
79	76,1	VIRIDIFLOROL	0,16	Tr – 1,0		SOLC
80	77,2	EUDESMA-5-EN-11-α-OL	0,04			SOLC
81	77,6	ROSIFOLIOL	0,03			SOLC
82	78,0	SPATHULENOL	0,05			SOLC
		TOTAL	99,99		2,82	

Classification by fonction : TEA TREE 8

CODE	FONCTION	NUMBER	%
TERPENES			
M	Monoterpene	19	46,52
S	Sesquiterpene	15	1,63
ALCOHOLS			
OLA	Aliphatic alcohol	2	0,02
OLT	Terpenic alcohol	12	48,45
OLAR	Aromatic alcohol	1	0,01
ESTERS			
EA	Aliphatic ester	2	0,04
ET	Terpenic ester	2	0,53
KETONES			
CA	Aliphatic ketone	1	0,10
CT	Terpenic ketone	3	0,17
ALDEHYDES			
ALD	Aldehyde	2	0,10
OXYDES			
O	Oxyde	3	0,37
PHENOL			
PE	Phenol Ether	1	0,48
SESQUITERPENOLS			
SOLC	Cyclic Sesquiterpenol	9	0,99
COMPOUNDS			
COX	Oxygenated compound	1	0,05
CF	Furanic compound	1	0,01
E	Ether	1	0,06
ALCA	Alkane	1	0,02
ALCE	Alkene	6	0,44
TOTAL		82	99,99