

GC/MS BATCH NUMBER: P10101

ESSENTIAL OIL: PALMAROSA
BOTANICAL NAME: CYMBOPOBON MARTINI
ORIGIN: INDIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF PALMAROSA OIL	%
GERANIOL	79.7
GERANYL ACETATE	8.4
LINALOOL	2.7
β -CARYOPHYLLENE	2.1
Trans- β -OCIMENE	1.5
FARNESOL	0.9
GERANYL CAPROATE	0.7
GERANIAL	0.4
cis- β -OCIMENE	0.4
NERAL	0.2
LIMONENE	0.2
MYRCENE	0.2

Comments from Robert Tisserand: A classic Palmarosa oil that smells of sweet hay and conforms to all 12 constituents of the AFNOR standard.

CUSTOMER :

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

Sample nature: ESSENTIAL OIL
Botanical species: CYMBOPOGON MARTINI
Reference name: PALMAROSA
Batch number: P10101
Origin: INDIA
Part: HERB
Pyrenessences reference: E349
Date of reception: 07/21/2015
Date analysis: 07/30/2015
Packaging: Amber flask of 4 ml – ambient temperature
Analysis: Classic

Validated report by :

Daniel DANTIN



GAS CHROMATOGRAPHY norm NF ISO 11024

Analysis conditions :

CPG 7890 / MS 5975 – Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

CPG 5890 FID - Column : INNOWAX polar 60 m × 0,25 mm × 0,5 µm

Temperature program : 6 mn to 60 °C –2 °C/mn→250 °C – 10 mn to 250 °C

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

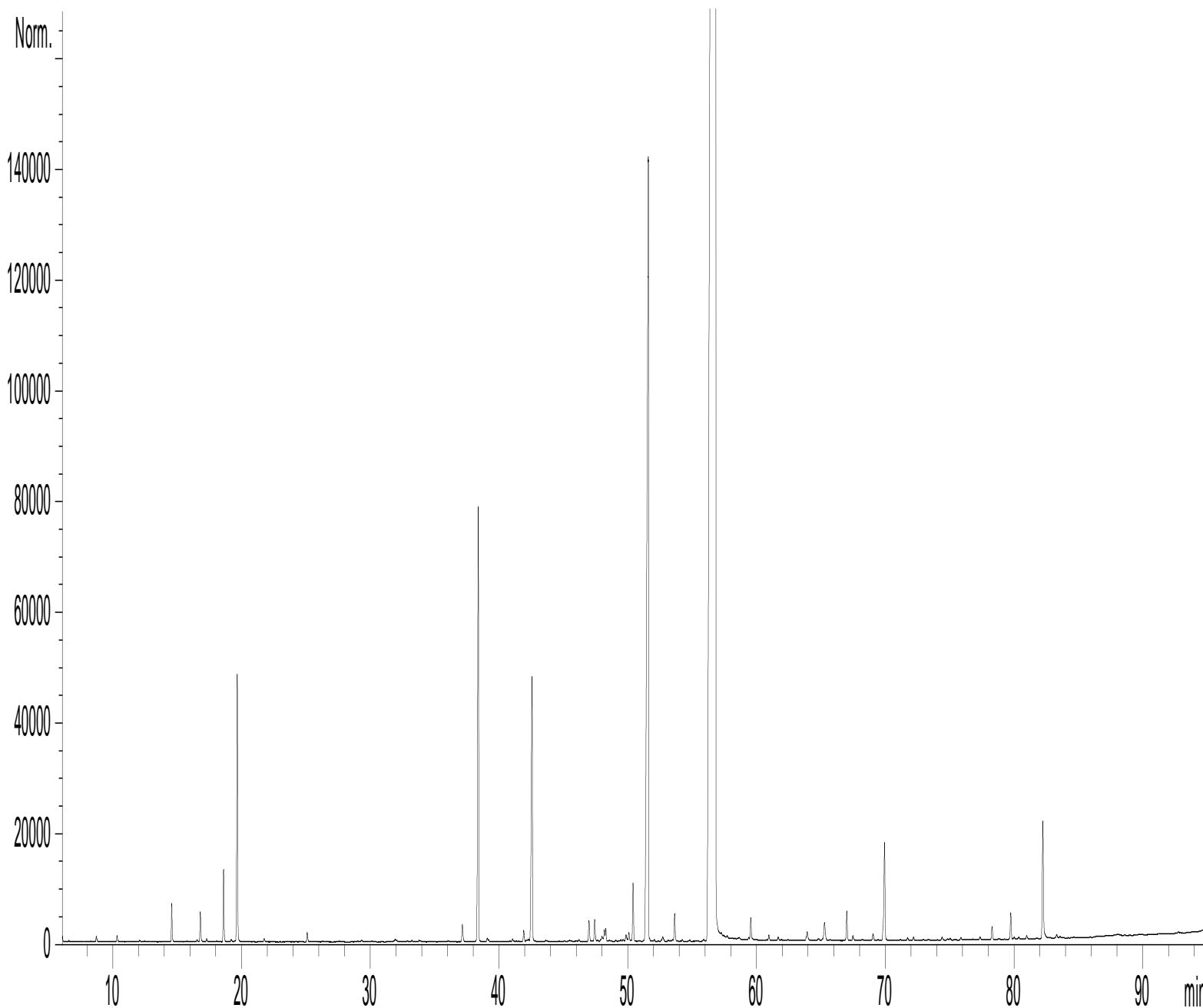
Sample injection / split : 1 µl of 10 % solution in hexane,

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, (Y:\PLANTHER\CM15E349.D)



Identification results 1 : PALMAROSA INDIA BATCH N° P10101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	4,7	ACETONE	0,01		
2	6,0	ISOVALERALDEHYDE	0,01		
3	6,1	ETHANOL	0,02		
4	8,7	α -PINENE	0,02		
5	8,8	α -THUYENE	0,01		
6	10,3	CAMPHENE	0,04		
7	12,1	β -PINENE	0,01		
8	12,5	SABINENE	0,01		
9	14,6	β-MYRCENE	0,19	0 – 0,5	
10	14,9	α -PHELLANDRENE	0,01		
11	15,8	2-HEPTANONE + α -TERPINENE	0,01		
12	16,6	ISOAMYL ALCOHOL	0,01		
13	16,8	LIMONENE	0,17	0 – 1,3	0,17
14	17,3	Cis-ARBUSCULONE	0,02		
15	17,4	β -PHELLANDRENE	0,01		
16	18,6	Cis-β-OCIMENE	0,38	0,2 – 0,6	
17	19,2	Trans-ARBUSCULONE	0,02		
18	19,5	γ -TERPINENE	0,01		
19	19,7	Trans-β-OCIMENE	1,51	0,5 – 3,0	
20	21,8	TERPINOLENE	0,02		
21	25,1	6-METHYL-5-HEPTEN-2-ONE	0,06		
22	26,3	ROSE cis-OXIDE	0,01		
23	27,6	ALLO-OCIMENE ISOMER	0,01		
24	29,3	NONANAL	0,02		
25	30,1	PERILLENE	0,01		
26	30,2	TETRADECANE	0,01		
27	31,9	LINALOOL cis-OXIDE	0,03		
28	32,9	1-HEPTANOL	0,01		
29	33,8	LINALOOL trans-OXIDE	0,01		
30	36,0	α -COPAENE	0,02		
31	37,2	CAMPHOR	0,13		
32	38,4	LINALOOL	2,71	1,0 – 5,5	2,71
33	39,1	1-OCTANOL	0,02		
34	39,2	LINALYL ACETATE	0,02		
35	41,1	ISOCARYOPHYLLENE	0,02		
36	41,3	SESQUITERPENE	0,01		
37	41,9	β -ELEMENE	0,07		
38	42,6	β-CARYOPHYLLENE	2,07	0,7 – 2,5	
39	43,6	LIMONENE EPOXIDE ISOMER	0,02		
40	45,5	E- β -FARNESENE	0,02		
41	47,0	α -HUMULENE	0,14		
42	47,4	NERAL	0,15	Nd – 0,5	0,15
43	48,0	α -TERPINEOL	0,05		
44	48,2	TERPENYL ACETATE + SESQUITERPENE	0,08		
45	48,3	GERANYL FORMIATE	0,07		

Identification results 2 : PALMAROSA INDIA BATCH N° P10101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
46	49,5	GERMACRENE D	0,02		
47	49,6	NERYL ACETATE	0,02		
48	49,9	VALENCENE	0,06		
49	50,1	β-SELINENE	0,07		
50	50,4	GERANIAL	0,35	0,2 – 0,6	0,35
51	50,5	β-SELINENE	0,02		
52	51,6	GERANYL ACETATE	8,37	7,0 – 16,0	
53	51,7	CITRONELLOL	0,02		0,02
54	52,1	δ-CADINENE	0,02		
55	52,7	7-épi-α-SELINENE	0,03		
56	52,9	γ-GERANIOL	0,02		
57	53,6	NEROL	0,20		
58	54,2	ISOGERANIOL	0,01		
59	54,8	E,E-2,6-DIMETHYL-3,5,7-OCTATRIENE-2-OL	0,01		
60	56,8	GERANIOL	79,72	72,0 – 86,0	79,72
61	57,2	TERPENIC EPOXIDE	0,02		
62	59,6	GERANYL BUTYRATE	0,15		
63	61,0	GERANYL METHYLBUTYRATE	0,03		
64	61,7	CYCLOAKYL COMPONENT	0,02		
65	64,0	TERPENIC ALCOHOL	0,07		
66	65,3	CARYOPHYLLENE EPOXYDE	0,17		
67	67,0	NEROLIDOL	0,18		
68	67,5	CAPRYLIC ACID	0,03		
69	69,1	EPOXY-6,7-HUMULENE	0,05		
70	69,8	2,3-EPOXY GERANYL ACETATE	0,09		
71	71,0	GERANYL CAPROATE	0,67	0,4 – 0,8	
72	71,7	PENTADECANONE TRIMETHYL	0,02		
73	72,2	TERPENIC DIOL	0,02		
74	74,4	T-CADINOL	0,02		
75	75,0	VINYL QUAJACOL	0,01		
76	75,9	FARNESYL FORMIATE	0,01		
77	77,4	HYDROXY-α-TERPENYL ACETATE ISOMER	0,02		
78	78,3	FARNESYL ACETATE	0,09		
79	79,7	GERANYL CAPRYLATE	0,17		
80	80,0	CARYOPHYLLENOL ISOMER	0,01		
81	80,4	CARYOPHYLLA-3,7-DIEN-6-OL	0,01		
82	81,0	HYDROXY-α-TERPENYL ACETATE ISOMER	0,02		
83	82,2	FARNESOL	0,85	0,2 – 1,5	0,85
84	83,3	BENZOFURAN, 2,3-DIHYDRO	0,02		
		TOTAL	99,95		83,97