



**PLANT THERAPY**  
100% PURE ESSENTIAL OILS

## GC/MS BATCH NUMBER: P10102

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**ESSENTIAL OIL:** PALMAROSA  
**BOTANICAL NAME:** CYMBOPOGON MARTINII  
**ORIGIN:** INDIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF PALMAROSA OIL	%
GERANIOL	80.5
GERANYL ACETATE	9.2
LINALOOL	2.3
$\beta$ -CARYOPHYLLENE	1.8
trans- $\beta$ -OCIMENE	1.3

Comments from Robert Tisserand: A beautiful green-rose, tea-like Palmarosa oil. All 12 key constituents conform to AFNOR standard.

**Date :** January 26, 2017

*SAMPLE IDENTIFICATION*

**Internal code :** 17A17-PTH1-1-DM

**Customer identification :** Palmarosa - India - P1010257R

**Type :** Essential Oil

**Source :** *Cymbopogon martinii*

**Customer :** Plant Therapy

*ANALYSIS*

**Method :** PC-PA-001-15E06, "Analysis of the composition of a liquid essential oil by GC-FID" (in French).

**Analyst :** Sylvain Mercier, M. Sc., chimiste

**Analysis date :** 2017-01-25

Checked and approved by :

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Alexis St-Gelais, M. Sc., chimiste 2013-174

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IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
Myrcene	4.41	994	0.16	0.14	1119	2.71	Monoterpene
6-Methyl-5-hepten-2-one	4.50	999	0.03	0.03	1282	5.04	Aliphatic ketone
6-Methyl-5-hepten-2-ol	4.71	1009	0.01	0.01	1425	7.62	Aliphatic alcohol
Limonene	5.09	1029	0.08	0.08	1144	3.05	Monoterpene
<i>cis</i> - $\beta$ -Ocimene	5.28	1039	0.37	0.37	1191	3.67*	Monoterpene
<i>trans</i> - $\beta$ -Ocimene	5.46	1048	1.33	1.33	1205	3.89	Monoterpene
$\gamma$ -Terpinene	5.67	1059	0.02	[0.37]	1191	3.67*	Monoterpene
<i>cis</i> -Linalool oxide (fur.)	5.94	1073	0.01	0.01	1383	6.66	Monoterp. alcohol
Terpinolene	6.11	1082	0.01	0.01	1226	4.20	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	6.19	1086	0.02	0.02	1408	7.20	Monoterp. alcohol
Linalool	6.67	1107	2.33	2.37	1499	9.53	Monoterp. alcohol
Nerol	10.53	1228	0.13	0.13	1731	20.98	Monoterp. alcohol
Neral	11.00	1239	0.16	0.16	1600	13.48	Monoterp. aldehyde
Geraniol	12.49	1272	80.52	81.17	1795	25.31	Monoterp. alcohol
Geranial	12.65	1276	0.37	0.31	1648	16.01	Monoterp. aldehyde
Geranyl formate	13.93	1302	0.07	0.07	1635	15.30	Monoterp. ester
$\beta$ -Elemene	18.62	1372	0.07	0.09	1518	10.26	Sesquiterpene
Geranyl acetate	19.32	1383	9.22	8.92	1695	18.54	Monoterp. ester
$\beta$ -Caryophyllene	20.29	1397	1.79	1.73	1516	10.17	Sesquiterpene
$\alpha$ -Humulene	23.02	1430	0.10	0.09	1578	12.54	Sesquiterpene
Germacrene D	25.44	1459	0.05	0.04	1602	13.58	Sesquiterpene
Caryophyllene oxide	33.50*	1565	0.37	0.14	1845	29.04	Sesquiterp. ether
Geranyl butyrate	33.50*	1565	[0.37]	0.17	1826	27.63	Monoterp. ester
( <i>E</i> )-Nerolidol	33.69	1567	0.14	0.12	1980	36.61	Sesquiterp. alcohol
(2 <i>E</i> ,6 <i>E</i> )-Farnesol	40.61	1719	0.89	0.85	2282	45.12	Sesquiterp. alcohol
Geranyl caproate	41.58	1749	0.76	0.69	2019	38.04	Monoterp. ester
(2 <i>E</i> ,6 <i>E</i> )-Farnesyl acetate	44.02	1831	0.09	0.09	2185	42.83	Sesquiterp. ester
Geranyl caprylate	46.96	1942	0.18	0.17	2217	43.61	Monoterp. ester
<b>Total identified</b>			<b>99.28%</b>	<b>99.31%</b>			

\*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

Note: no correction factor was applied

OTHER DATA

**Physical aspect :** Light yellow liquid

**Refractive index :** 1.4718  $\pm$  0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent were detected using this method.



