



GC/MS BATCH NUMBER: PK0100

ESSENTIAL OIL: PALMAROSA ORGANIC
BOTANICAL NAME: CYMBOPOGON MARTINII
ORIGIN: NEPAL

KEY CONSTITUENTS PRESENT IN THIS BATCH OF PALMAROSA ORGANIC OIL	%
GERANIOL	78.9
GERANYL ACETATE	9.1
LINALOOL	3.1
β -CARYOPHYLLENE	2.0
trans- β -OCIMENE	1.8

Date : September 30, 2016

SAMPLE IDENTIFICATION

Internal code : 16I22-PTH1-1-DM

Customer identification : Organic Palmarosa - Nepal - PK010059R

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 : 2016-09-27

Checked and approved by :

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.	
Isoamyl alcohol	1.14	728	0.02	0.02	1148	2.37	Aliphatic alcohol
Myrcene	4.41	988	0.22	0.19	1112	1.95	Monoterpene
6-Methyl-5-hepten-2-one	4.49	993	0.04	0.04	1271	3.93	Aliphatic ketone
6-Methyl-5-hepten-2-ol	4.71	1006	0.02	0.02	1416	5.98	Aliphatic alcohol
Limonene	5.09	1027	0.12	0.11	1136	2.23	Monoterpene
<i>cis</i> - β -Ocimene	5.28	1037	0.47	0.48	1182	2.77*	Monoterpene
<i>trans</i> - β -Ocimene	5.46	1047	1.78	1.77	1198	2.96	Monoterpene
γ -Terpinene	5.66	1058	0.02	[0.48]	1182	2.77*	Monoterpene
<i>cis</i> -Linalool oxide (fur.)	5.93	1073	0.02	0.02	1374	5.38	Monoterp. alcohol
Terpinolene	6.11	1082	0.02	0.01	1220	3.22	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	6.25	1090	0.01	0.01	1402	5.79	Monoterp. alcohol
Linalool	6.66	1107	3.06	3.09	1490	7.36	Monoterp. alcohol
Nerol	10.51	1229	0.15	0.15	1728	15.57	Monoterp. alcohol
Citronellol	10.79	1236	0.02	0.02	1704	14.53	Monoterp. alcohol
Neral	10.97	1240	0.16	0.15	1596	10.17	Monoterp. aldehyde
Geraniol	12.45	1272	78.88	79.50	1791	19.19	Monoterp. alcohol
Geranial	12.60	1276	0.36	0.33	1648	12.04	Monoterp. aldehyde
Geranyl formate	13.92	1302	0.08	0.11	1635	11.44*	Monoterp. ester
Citronellyl acetate	17.02	1350	0.01	0.01	1601	10.34	Monoterp. ester
β -Elemene	18.61	1374	0.06	2.02	1524	8.04*	Sesquiterpene
Geranyl acetate	19.31	1385	9.05	8.84	1693	13.99	Monoterp. ester
β -Caryophyllene	20.28	1399	1.97	[2.02]	1524	8.04*	Sesquiterpene
α -Humulene	23.00	1432	0.12	0.11	1582	9.77	Sesquiterpene
Germacrene D	25.42	1461	0.06	[0.11]	1635	11.44*	Sesquiterpene
γ -Cadinene	28.24	1494	0.03	0.05	1666	12.83	Sesquiterpene
Caryophyllene oxide	33.48*	1566	0.37	0.14	1851	22.82	Sesquiterp. ether
Geranyl butyrate	33.48*	1566	[0.37]	0.17	1834	21.68	Monoterp. ester
(<i>E</i>)-Nerolidol	33.66	1568	0.15	0.19	1996	32.16	Sesquiterp. alcohol
(2 <i>E</i> ,6 <i>E</i>)-Farnesol	40.60	1721	0.85	0.88	2296	42.26	Sesquiterp. alcohol
Geranyl caproate	41.58	1752	0.71	0.63	2035	34.48	Monoterp. ester
(2 <i>E</i> ,6 <i>E</i>)-Farnesyl acetate	44.02	1835	0.09	0.09	2203	39.97	Sesquiterp. ester
Geranyl caprylate	46.95	1945	0.19	0.18	2243	41.03	Monoterp. ester
Total identified			99.11%	99.33%			

*: 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 : Faintly yellow liquid

Refractive index : 1.4715 ± 0.0003 (20 °C)

CONCLUSION

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



