

ANALYSIS Myrtle, Honey Essential Oil

Laboratoire
PhytoChemia



Plus que des analyses... des conseils



Date : June 16, 2017

SAMPLE IDENTIFICATION

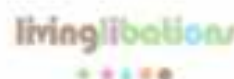
Internal code : 17F08-FSE20-1-DM

Customer Identification : Honey Myrtle - Lot #9346754000578

Type : Essential oil

Source : Melaleuca uncinata

Customer : Flowers Shining Everywhere Inc.



ANALYSIS



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

• Identifications double-checked by GC-MS

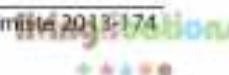
Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2017-06-15



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.	
Methyl 2-methylbutyrate	1.31	758	0.01	tr	907	0.94	Aliphatic ester
cis-Hex-3-en-1-ol	2.49	866	0.02	0.01	1320	5.21	Aliphatic alcohol
α -Thujene	3.31	922	0.01	0.02	953	1.12	Monoterpene
α -Pinene	3.41	929	0.89	0.89	936	1.04	Monoterpene
Camphene	3.70	946	0.01	0.01	990	1.30	Monoterpene
Sabinene	4.13	971	0.02	0.02	1054	1.78	Monoterpene
β -Pinene	4.19	975	0.37	0.35	1037	1.63	Monoterpene
Myrcene	4.50*	993	10.65	10.05	1113	2.36	Monoterpene
Dehydro-1,8-cineole	4.50*	993	[10.65]	0.51	1123	2.49	Monoterp. ether
6-Methyl-5-hepten-2-one	4.53	995	0.37	0.37	1269	4.46	Aliphatic ketone
cis-Hex-3-en-1-yl acetate	4.87	1014	0.03	0.03	1252	4.22	Aliphatic ester
α -Terpinene	4.93	1017	0.02	0.08	1117	2.41	Monoterpene
Menthatriene analog A	5.08	1025	0.06	0.06	1177	3.19	Monoterpene
para-Cymene	5.12	1028	0.03	0.03	1200	3.48	Monoterpene
Limonene	5.16	1030	0.56	0.51	1134	2.63	Monoterpene
β -Phellandrene	5.19	1031	0.03	1.41	1140	2.70*	Monoterpene
1,8-Cineole	5.22	1033	1.31	[1.41]	1140	2.70*	Monoterp. ether
cis- β -Ocimene	5.34	1040	0.01	0.06	1180	3.22*	Monoterpene
trans- β -Ocimene	5.52	1049	0.06	0.06	1194	3.40	Monoterpene
γ -Terpinene	5.71	1060	0.06	[0.06]	1180	3.22*	Monoterpene
Terpinolene	6.18	1086	0.05	0.04	1216	3.69	Monoterpene
para-Cymenene	6.39	1097	0.07	0.03	1360	5.83	Monoterpene
α -Linalool	6.51	1102	0.03	1.53	1495	8.51*	Monoterp. alcohol
Linalool	6.65	1107	0.69	0.75	1483	8.24	Monoterp. alcohol
Nonanal	6.73	1111	0.01	0.02	1330	5.36	Aliphatic aldehyde
trans-para-Mentha-2,8-dien-1-ol	7.54	1140	0.07	0.08	1548	10.03	Monoterp. alcohol
exo-Isocitral	7.68	1145	0.20	0.15	1442	7.27	Monoterp. aldehyde
Citronellal	7.93	1154	0.17	0.16	1409	6.60	Monoterp. aldehyde
(Z)-Isocitral	8.22	1163	1.22	1.06	1468	7.87	Monoterp. aldehyde
α -Phellandren-8-ol	8.65	1181	0.37				Monoterp. alcohol
Unknown (m/z = 84, 83 (81), 137 (69), 41 (58), 91 (52), 93 (50)... 152 (2))	8.78	1186	0.22				Monoterp. alcohol
(E)-Isocitral	8.84	1188	1.97	[1.53]	1495	8.51*	Monoterp. aldehyde
α -Terpineol	9.37	1204	0.50	0.42	1618	12.60	Monoterp. alcohol
β -Phellandren-8-ol	9.49	1207	0.15	2.99	1724	17.92*	Monoterp. alcohol
trans-Isopiperitenol	9.55	1208	0.29				Monoterp. alcohol
Unknown (m/z = 84, 83 (76), 137 (66), 41 (58), 93 (57), 91 (56), 119 (56)... 152	9.70	1212	0.33				Monoterp. alcohol

(3)							
Nerol	10.67	1233	2.70	[2.99]	1729	17.92	Monoterp. alcohol
Citronellol	10.92	1239	0.25	0.23	1699	16.63	Monoterp. alcohol
Neral	11.36	1248	30.06	30.41	1599	11.90*	Monoterp. aldehyde
Piperitone	11.45	1250	0.12	0.10	1629	13.02	Monoterp. ketone
Geraniol	12.05	1264	3.82	3.85	1776	21.15	Monoterp. alcohol
Geranial	12.98	1284	38.95	40.11	1652	14.20	Monoterp. aldehyde
Unknown (m/z = 69, 41 (88), 91 (64), 79 (56), 92 (48), 93 (47),...)	13.50	1296	0.27				
Myrtenyl acetate	15.16	1322	0.02	[30.41]	1599	11.90*	Monoterp. ester
Eugenol	17.39	1356	0.03	0.03	2048	37.30	Phenylpropanoid
Neryl acetate	17.79	1362	0.41	0.54	1655	14.33	Monoterp. ester
β -Elemene	18.84	1378	0.21	0.13	1523	9.18	Sesquiterpene
Geranyl acetate	19.27	1385	0.73	0.73	1683	15.82	Monoterp. ester
α -Gurjunene	19.60	1390	0.03	0.02	1454	7.56	Sesquiterpene
β -Caryophyllene	20.49	1403	0.11	0.12	1514	8.96	Sesquiterpene
allo-Aromadendrene	23.52	1439	0.03	0.03	1556	10.34	Sesquiterpene
meta-Camphorene	46.86	1944	0.16	0.17	2130	39.84	Diterpene
para-Camphorene	47.74	1980	0.07	0.06	2174	41.04	Diterpene
Total Identified			98.01%			98.23%	

*: 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 : 1.4830 \pm 0.0003 (20 °C)

Conclusion

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

