

Analysis Magnolia Leaf Essential Oil

Laboratoire
PhytoChemia



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Date : March 31, 2017

SAMPLE IDENTIFICATION

Internal code : 17C27-FSE3-1-DM

Customer identification : Magnolia Leaf - Lot #162372

Type : Essential oil

Source : *Michelia champaca*

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).

Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2017-03-30

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.	
Ethanol	0.35	632	0.03	0.03	804	0.70	Aliphatic alcohol
α -Thujene	3.30	922	0.01	0.01	951	1.20	Monoterpene
α -Pinene	3.40	928	0.08	0.07	941	1.15	Monoterpene
Camphene	3.69	945	0.09	0.08	995	1.43	Monoterpene
Sabinene	4.12	970	0.04	0.04	1054	1.96	Monoterpene
β -Pinene	4.18	974	0.17	0.16	1035	1.79	Monoterpene
Myrcene	4.45	990	0.12	0.09	1113	2.53	Monoterpene
para-Cymene	5.09	1026	0.02	0.01	1205	3.75	Monoterpene
Limonene	5.14	1028	0.15	0.10	1137	2.85	Monoterpene
1,8-Cineole	5.20	1032	0.19	0.18	1143	2.92	Monoterpene ether
cis- β -Ocimene	5.32	1039	1.29	1.29	1184	3.45*	Monoterpene
trans- β -Ocimene	5.51	1049	2.23	2.18	1200	3.67	Monoterpene
γ -Terpinene	5.69	1059	0.02	[1.29]	1184	3.45*	Monoterpene
cis-Linalool oxide (fur.)	5.95	1073	0.21	0.20	1374	6.30	Monoterp. alcohol
Terpinolene	6.16	1084	0.06	0.05	1220	3.96	Monoterpene
trans-Linalool oxide (fur.)	6.27	1090	0.16	0.38	1405	6.79*	Monoterp. alcohol
Methyl benzoate	6.37	1096	0.01	0.01	1533	10.19	Phenolic ester
Rose furan	6.45	1100	0.02	0.03	1345	5.85	Monoterp. ether
Linalool	6.80	1113	66.72	67.17	1502	9.14	Monoterp. alcohol
Phenylethyl alcohol	7.07	1123	0.03	0.03	1807	24.67	Simple phenolic
cis-Linalool oxide (pyr.)	8.46	1174	0.05	0.03	1691	17.33	Monoterp. alcohol
Terpinen-4-ol	8.67	1181	0.06	0.04	1527	9.97	Monoterp. alcohol
α -Terpineol	9.27	1202	0.55	1.83	1621	13.67*	Monoterp. alcohol
Methylchavicol	9.35	1204	0.09	0.10	1580	11.95	Phenylpropanoid
Nerol	10.36	1226	0.16	0.20	1727	19.42	Monoterp. alcohol
Geraniol	11.61	1254	0.43	0.44	1780	22.82	Monoterp. alcohol
α -Cubebene	15.84	1333	0.19	[0.38]	1405	6.79*	Sesquiterpene
α -Copaene	17.53	1358	0.68	0.69	1427	7.34	Sesquiterpene
β -Cubebene	18.50	1373	0.22	0.22	1471	8.39	Sesquiterpene
β -Elemene	18.78	1377	3.55	3.73	1523	9.83	Sesquiterpene
β -Caryophyllene	20.49	1403	7.08	7.22	1521	9.76*	Sesquiterpene
cis- α -Bergamotene	20.77	1406	0.05	0.07	1509	9.31	Sesquiterpene
Methyleugenol	21.18	1411	0.37	0.31	1931	33.23	Phenylpropanoid
trans- α -Bergamotene	21.95	1420	0.17	[7.22]	1521	9.76*	Sesquiterpene
α -Humulene	23.15	1435	1.90	1.94	1577	11.83	Sesquiterpene
γ -Murolene	24.83	1455	0.18	0.22	1606	12.92	Sesquiterpene
Germacrene D	25.34	1461	1.91	1.80	1617	13.43	Sesquiterpene
β -Selinene	25.93	1468	1.38	[1.83]	1621	13.67*	Sesquiterpene
α -Selinene	26.57	1476	1.02	1.08	1629	14.02	Sesquiterpene
Germacrene A	27.31	1485	0.21	0.40	1686	17.05	Sesquiterpene
γ -Cadinene	28.31	1497	0.14	0.11	1661	15.77	Sesquiterpene

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β-Bisabolene	28.55	1500	0.18	0.16	1652	15.26	Sesquiterpene
δ-Cadinene	29.02	1506	1.29	1.43	1669	16.12	Sesquiterpene
Methyl (E)-isoeugenol	29.23	1509	0.22	0.13	2092*	39.48	Phenylpropanoid
(E)-Nerolidol	33.53*	1569	1.97	1.46	1985	35.67	Sesquiterp. alcohol
Caryophyllene oxide	33.53*	1569	[1.97]	0.50	1843	27.26	Sesquiterp. ether
Humulene epoxide II	35.17	1592	0.09	0.12	1897	31.11	Sesquiterp. ether
τ-Cadinol	37.17	1634	0.11	0.13	2064	38.63	Sesquiterp. alcohol
τ-Murolol	37.29	1637	0.18	0.18	2084	39.22	Sesquiterp. alcohol
Selin-11-en-4-α-ol	37.59	1645	0.13	0.09	2130	40.62	Sesquiterp. alcohol
Total identified			96.21%	96.74%			

*: 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 : 1.4700 ± 0.0003 (20 °C)

CONCLUSION

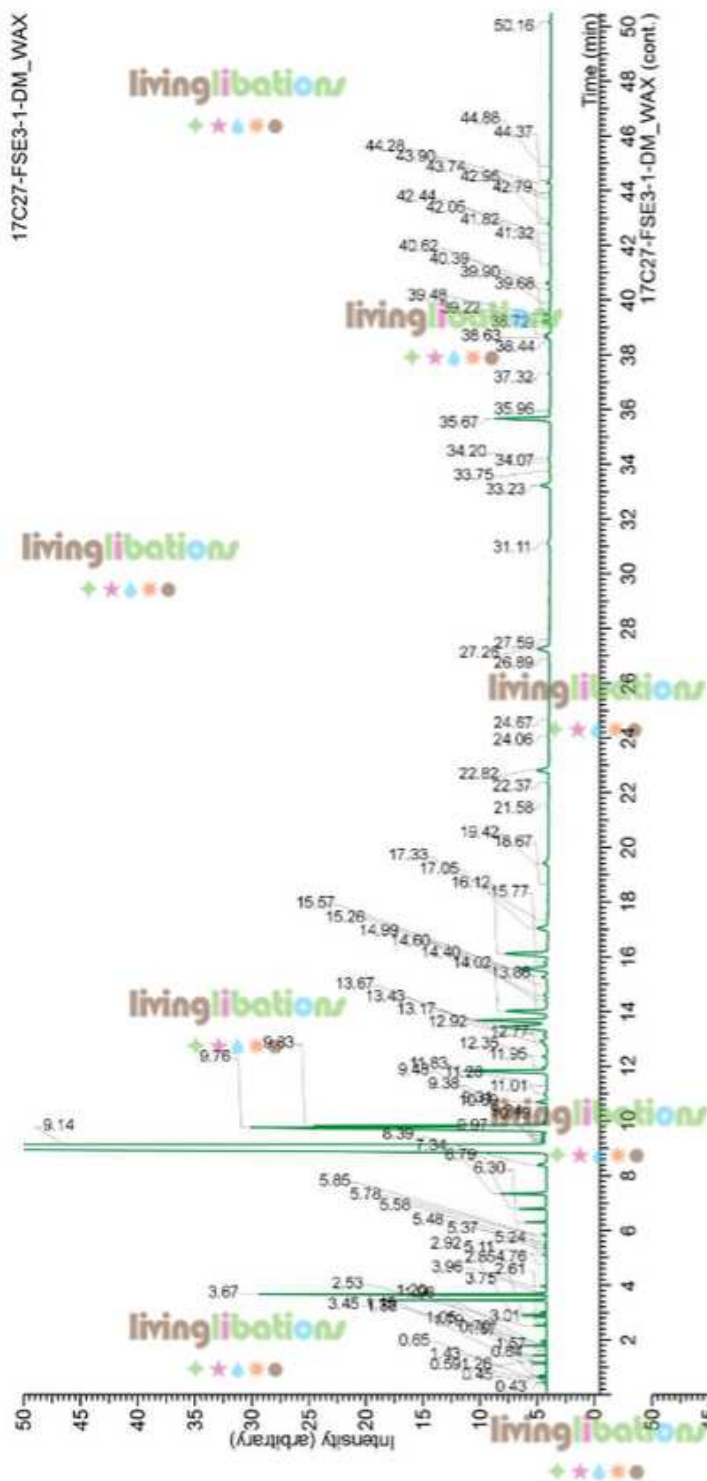
No adulterant, contaminant or diluent were detected using this method. The sample however corresponds to the expected composition for a *Michelia alba* absolute.

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17C27-FSE3-1-DM_WAX



17C27-FSE3-1-DM_BP5

