

Myrrh Essential Oil

ANALYSIS

Laboratoire
PhytoChemia





Date : December 15, 2016

SAMPLE IDENTIFICATION

Internal code : 16L05-FSE24-1-DM
Customer identification : Myrrh - Lot#861314
Type : Essential oil
Source : *Commiphora myrrha*
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 : Alexis St-Gelais, M. Sc., chimiste
Analysis date : 2016-12-13

Checked and approved by :



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

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IDENTIFIED COMPOUNDS
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Identification	Column: BPS			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
α -Pinene	3.38	926	0.02	0.02	951	0.88	Monoterpene
Limonene	5.13	1029	0.01	0.01	1142	2.30	Monoterpene
δ -Elemene	15.21	1322	0.25	0.27	1431	6.25	Sesquiterpene
α -Copaene	17.57	1358	0.08	0.09	1450	6.60	Sesquiterpene
β -Bourbonene	18.00	1365	0.32	0.31	1468	6.96	Sesquiterpene
β -Elemene	18.87	1378	1.99	2.35	1536	8.37*	Sesquiterpene
β -Caryophyllene	20.48	1401	0.30	[2.35]	1536	8.37*	Sesquiterpene
β -Copaene	21.38	1412	0.08	0.08	1520	7.94	Sesquiterpene
γ -Elemene	21.77	1417	0.12	0.12	1578	9.64	Sesquiterpene
6,9-Guaiadiene	22.43	1425	0.06	0.07	1525	8.07	Sesquiterpene
α -Humulene	23.27	1435	0.12	0.07	1593	10.08	Sesquiterpene
γ -Muurolene	24.97	1455	0.08	0.08	1624	11.03	Sesquiterpene
Germacrene D	25.50	1462	0.74	0.76	1635	11.43	Sesquiterpene
β -Selinene	26.11	1469	0.43	0.43	1639	11.64	Sesquiterpene
α -Selinene	26.75	1476	0.38	0.37	1646	11.95	Sesquiterpene
Curzerene	27.61	1486	6.17	5.83	1774	18.20	Sesquiterp. ether
γ -Cadinene	27.75	1488	1.56	1.90	1674	13.19*	Sesquiterpene
δ -Cadinene	29.27	1508	0.29	[1.90]	1674	13.19*	Sesquiterpene
Germacrene B	31.99	1545	2.85	2.98	1734	15.87	Sesquiterpene
α -Elemol	32.74	1555	0.10	32.92	2004	32.59*	Sesquiterp. alcohol
Caryophyllene oxide	33.76	1569	0.05	0.07	1855	23.06	Sesquiterp. ether
(E)-Nerolidol	33.98	1572	0.44	[32.92]	2004	32.59*	Sesquiterp. alcohol
cis- β -Elemenone?	35.79	1600	0.24				Sesquiterp. ketone
Furanoeudesma-1,3-diene	36.70	1622	23.56	[32.92]	2004	32.59*	Sesquiterp. ether
Lindestrene	36.97	1628	7.55	[32.92]	2004	32.59*	Sesquiterp. ether
τ -Cadinol	37.15	1633	0.43	19.54	2059	35.50*	Sesquiterp. alcohol
Isofuranogermacrene	37.89	1650	0.11	[32.92]	2004	32.59*	Sesquiterp. ether
α -Cadinol	37.93	1651	0.22	2.71	2133	38.00*	Sesquiterp. alcohol
Elemyl acetate	38.49	1665	0.56	0.47	1952	29.62	Sesquiterp. ester
Germacrone	38.68	1670	0.12	0.11	2074	36.04	Sesquiterp. ketone
Unidentified furanoeudesmane	39.41	1686	18.63	[19.54]	2059	35.50*	Sesquiterp. ether
2-Methoxyfuranodiene	40.37	1714	2.75	[2.71]	2133	38.00*	Sesquiterp. ether
Unknown, not seen in MS	44.01	1834	3.89	4.73	2313	42.64	
2-Acetoxyfuranodiene	45.60	1891	0.99	1.03	2451	45.57	Sesquiterp. ester
Unknown (m/z = 197, 108 (82), 43 (64), 212 (54), 169	48.51	2009	8.09	9.03	2640	49.09	Diterpene

(43), 79 (37), 183 (34)... 272
(9)

Total identified	71.6%	72.59%	
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*: 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 : Bright yellow liquid

Refractive Index : 1.5288 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent were detected using this method. Please note that CO₂ extracts often contain a larger portion of unidentifiable compounds than essential oils.



16L05-FSE24-1-DM_WAX

