



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: F40103

ESSENTIAL OIL: FRANKINCENSE SERRATA
BOTANICAL NAME: BOSWELLIA SERRATA
ORIGIN: INDIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF FRANKINCENSE SERRATA OIL	%
α -THUJENE	71.7
α -PINENE	5.2
SABINENE	4.6
Δ 3-CARENE	3.9
LIMONENE	2.0
p-CYMENE	1.9
α -TERPINEOL	1.4
ESTRAGOLE (METHYL CHAVICOL)	1.3
α -PHELLANDRENE	1.3
γ -TERPINENE	1.1
TERPINEN-4-OL	1.0

Comments from Robert Tisserand: Organoleptically, this is a very nice Frankincense oil, and there are no concerns with the lab report.

Date : July 25, 2016

SAMPLE IDENTIFICATION

Internal code : 16G07-PTH6-1-DM

Customer identification : Frankincense Serrata - F40103R

Type : Essential oil

Source : *Boswellia serrata*

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 : 2016-07-25

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.	
Toluene	1.27	749	0.01	75.98	971	0.99*	Simple phenolic
Tricyclene	3.14*	917	0.16	0.04	920	0.78	Monoterpene
Hashishene	3.14*	917	[0.16]	[75.98]	971	0.99*	Monoterpene
α -Thujene	3.33	928	71.67	[75.98]	971	0.99*	Monoterpene
α -Pinene	3.39	931	5.20	[75.98]	971	0.99*	Monoterpene
Thuja-2,4(10)-diene	3.58	943	0.65	1.02	1066	1.62	Monoterpene
Camphene	3.64	946	0.07	0.04	1004	1.13	Monoterpene
Sabinene	4.07	973	4.64	4.56	1059	1.57	Monoterpene
β -Pinene	4.12	976	0.51	0.26	1041	1.42	Monoterpene
Myrcene	4.40	993	0.69	0.80	1116	2.05*	Monoterpene
Δ^3 -Carene	4.68*	1009	4.85	3.93	1092	1.83	Monoterpene
α -Phellandrene	4.68*	1009	[4.85]	1.34	1109	1.98	Monoterpene
α -Terpinene	4.86	1019	0.47	0.55	1123	2.13	Monoterpene
meta-Cymene	4.96	1024	0.10	[0.80]	1116	2.05*	Monoterpene
para-Cymene	5.06	1030	1.89	2.17	1210	3.14	Monoterpene
Limonene	5.09	1032	2.00	1.95	1140	2.34	Monoterpene
β -Phellandrene	5.11	1033	0.40	0.54	1146	2.40*	Monoterpene
1,8-Cineole	5.15	1035	0.23	[0.54]	1146	2.40*	Monoterp. ether
cis- β -Ocimene	5.27	1042	0.43	1.49	1189	2.90*	Monoterpene
trans- β -Ocimene	5.45	1051	0.23	0.24	1203	3.07	Monoterpene
Lavender lactone	5.60	1060	0.03	0.03	1619	11.14	Lactone
γ -Terpinene	5.63	1062	1.06	[1.49]	1189	2.90*	Monoterpene
cis-Sabinene hydrate	5.98	1081	0.04	0.05	1409	5.98	Monoterp. alcohol
Terpinolene	6.10	1088	0.28	0.31	1224	3.35	Monoterpene
Linalool	6.63	1112	0.14	0.12	1494	7.59	Monoterp. alcohol
β -Thujone	6.89	1122	0.24	0.22	1366	5.36	Monoterp. ketone
trans-para-Menth-2-en-1-ol	7.61	1149	0.05	0.03	1563	9.45	Monoterp. alcohol
Camphor	7.75	1154	0.01	0.12	1436	6.46*	Monoterp. ketone
Terpinen-4-ol	8.64	1188	0.91	0.95	1530	8.42*	Monoterp. alcohol
α -Terpineol	9.32*	1209	1.35	0.18	1624	11.40	Monoterp. alcohol
Methylchavicol	9.32*	1209	[1.35]	1.31	1581	9.98	Phenylpropanoid
Linalyl acetate	11.59	1260	0.04	0.04	1507	7.84	Monoterp. ester
α -Copaene	17.29	1362	0.05	[0.12]	1436	6.46*	Sesquiterpene
β -Bourbonene	17.71	1368	0.37	0.36	1456	6.85	Sesquiterpene
β -Elemene	18.72	1384	0.07	[0.95]	1530	8.42*	Sesquiterpene
β -Caryophyllene	20.16	1405	0.05	0.04	1523	8.23	Sesquiterpene
Methyleugenol	21.26	1419	0.06	0.06	1928	29.17	Phenylpropanoid
6,9-Guaiadiene	22.09	1429	0.03	0.03	1539	8.72	Sesquiterpene
Germacrene D	25.07	1465	0.06	0.09	1632	11.77	Sesquiterpene
Kessane	28.96	1513	0.05	0.07	1667	13.33	Sesquiterp. ether

Incensole?	51.16	2138	0.05	0.04	2579	48.77	Diterp. alcohol
Total identified	99.14%		98.96%				

*: 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 : Clear liquid

Refractive index : 1.4570 ± 0.0003 (20 °C)

CONCLUSION

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



