

GC/MS BATCH NUMBER: C20101

ESSENTIAL OIL: ORGANIC CAJEPUT
BOTANICAL NAME: MELALEUCA CAJEPUTI
ORIGIN: VIETNAM

KEY CONSTITUENTS PRESENT IN THIS BATCH OF ORGANIC CAJEPUT OIL	%
1,8-CINEOLE	63.3
α -TERPINEOL	11.7
LINALOOL	3.1
γ -TERPINENE	1.9
MYRCENE	1.8
α -PINENE	1.7
TERPINOLENE	1.6
β -EUDESMOL	1.2
β -PINENE	1.1
TERPINEN-4-OL	1.0

Comments from Robert Tisserand: This looks and smells like a very fine Cajeput oil.

Date : October 28, 2015

SAMPLE IDENTIFICATION

Internal code : 15J20-PTH7-1-LC

Customer identification : Cajeput Organic - Vietnam - C20101412R

Type : Essential oil

Source : *Melaleuca cajuputi*

Customer : Plant Therapy

ANALYSIS

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

Analyst : Alexis St-Gelais, M. Sc.

Analysis date : 2015-10-21

IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
α -Thujene	2.70	919	0.22	0.26	996	1.12	Monoterpene
α -Pinene	2.79	925	1.65	1.60	986	1.07	Monoterpene
Camphene	3.05*	941	0.04	0.03	1024	1.35	Monoterpene
α -Fenchene	3.05*	941	[0.04]	0.01	1018	1.29	Monoterpene
Sabinene	3.46	967	0.02	0.02	1083	1.87	Monoterpene
β -Pinene	3.50	970	1.10	1.13	1064	1.70	Monoterpene
Benzaldehyde	3.54	973	0.19	0.17	1457	7.41	Simple phenolic
Myrcene	3.81	990	1.80	1.70	1135	2.46	Monoterpene
Pseudolimonene	3.99	1001	0.06	0.07	1128	2.37	Monoterpene
Δ 3-Carene	4.04*	1004	0.25	0.02	1111	2.16	Monoterpene
α -Phellandrene	4.04*	1004	[0.25]	0.20	1126	2.35	Monoterpene
α -Terpinene	4.23*	1015	0.60	0.27	1140	2.52	Monoterpene
1,4-Cineole	4.23*	1015	[0.60]	0.34	1141	2.53	Monoterp. ether
Limonene	4.47	1028	0.65	0.99	1161	2.78	Monoterpene
1,8-Cineole	4.58*	1035	63.76	63.34	1173	2.93	Monoterp. ether
para-Cymene	4.58*	1035	[63.76]	0.58	1229	3.68	Monoterpene
<i>trans</i> - β -Ocimene	4.82	1049	0.02	0.02	1221	3.57	Monoterpene
γ -Terpinene	4.99	1058	1.91	1.89	1208	3.39	Monoterpene
<i>cis</i> -Linalool oxide (fur.)	5.25	1073	0.01	0.01	1399	6.22	Monoterp. alcohol
Terpinolene	5.44	1084	1.58	1.55	1242	3.87	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	5.55	1090	0.01	0.02	1429	6.83	Monoterp. alcohol
para-Cymenene	5.63	1095	0.03	0.04	1390	6.07	Monoterpene
Linalool	5.91	1109	3.14	3.07	1516	8.82	Monoterp. alcohol
Borneol	7.36	1175	0.23	0.51	1638	13.38*	Monoterp. alcohol
Terpinen-4-ol	7.50	1181	1.00	0.97	1545	9.75	Monoterp. alcohol
α -Terpineol	8.15	1206	11.72	12.16	1643	13.61*	Monoterp. alcohol
Piperitone	9.97	1256	0.30	[12.16]	1643	13.61*	Monoterp. ketone
α -Terpinyl acetate	14.30	1347	0.15	[0.51]	1638	13.38*	Monoterp. ester
β -Caryophyllene	17.17	1397	1.55	1.44	1531	9.32	Sesquiterpene
Aromadendrene	18.51	1416	0.05	0.09	1535	9.45	Sesquiterpene
α -Humulene	19.63	1430	0.98	1.10	1598	11.51*	Sesquiterpene
<i>trans</i> -Cadinane-1(6),4-diene	21.20	1451	0.12	[1.10]	1598	11.51*	Sesquiterpene
γ -Muurolene	21.36	1453	0.20	0.25	1617	12.36	Sesquiterpene
Germacrene D	21.80	1459	0.29	0.34	1627	12.87	Sesquiterpene
β -Selinene	22.17	1464	0.89	[12.16]	1643	13.61*	Sesquiterpene
Viridiflorene	22.33	1466	0.38	0.29	1621	12.57	Sesquiterpene
α -Selinene	22.77	1472	0.83	0.89	1644	13.68	Sesquiterpene
Bicyclgermacrene	23.62*	1483	0.32	0.21	1647	13.81	Sesquiterpene
Germacrene A	23.62*	1483	[0.32]	0.18	1692	15.91	Sesquiterpene
α -Cadinene	26.22	1515	0.11	0.06	1710	16.94	Sesquiterpene
Germacrene B	27.49	1531	0.17	0.15	1730	18.19	Sesquiterpene

Guaiol	32.16	1586	0.89	0.90	2015	36.09	Sesquiterp. alcohol
γ -Eudesmol	34.23	1619	0.45	0.43	2082	38.41	Sesquiterp. alcohol
β -Eudesmol	35.36*	1642	1.23	0.73	2122	39.67	Sesquiterp. alcohol
Total identified			98.9%	98.03%			

*: 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 : 1.4640 \pm 0.0003 (20 °C)

CONCLUSION

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

Checked and approved by :

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

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