

GC/MS BATCH NUMBER: C20103

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

KEY CONSTITUENTS PRESENT IN THIS BATCH OF CAJEPUT ORGANIC OIL	%
1,8-CINEOLE +LIMONENE	62.1
α -TERPINEOL	12.1
LINALOOL	3.0
β -CARYOPHYLLENE	1.9
α -PINENE	1.7
γ -TERPINENE	1.5
β -EUDESMOL	1.5
MYRCENE	1.4
α -HUMULENE	1.4
β -PINENE	1.2
β -SELINENE	1.2
TERPINOLENE	1.2
TERPINEN-4-OL	1.2
α -SELINENE	1.1
GUAIOL	1.0

Comments from Robert Tisserand: Sweet, green Eucalyptus-like odor quality. Constituents are in expected amounts.

Date : December 13, 2017

SAMPLE IDENTIFICATION

Internal code : 17L11-PTH5-1-CC

Customer identification : Cajeput Organic - Viet Nam - C2010315R

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).

Identifications double-checked by GC-MS

Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2017-12-13

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.	
α -Thujene	3.32	921	0.21	1.82	945	1.12*	Monoterpene
α -Pinene	3.43	927	1.69	[1.82]	945	1.12*	Monoterpene
Camphene	3.71	944	0.03	0.04	1000	1.39	Monoterpene
Sabinene	4.15	969	0.01				Monoterpene
β -Pinene	4.21	973	1.21	1.13	1038	1.74	Monoterpene
Benzaldehyde	4.24	975	0.20	0.42	1425	7.17*	Simple phenolic
Myrcene	4.49	990	1.41	1.19	1115	2.48*	Monoterpene
Pseudolimonene	4.71	1002	0.06	[1.19]	1115	2.48*	Monoterpene
α -Phellandrene	4.77	1005	0.18	0.10	1111	2.42	Monoterpene
α -Terpinene	4.96	1016	0.43	0.65	1120	2.55	Monoterpene
1,8-Cineole	5.32*	1035	62.20	62.11	1151	2.95*	Monoterp. ether
Limonene	5.32*	1035	[62.20]	[62.11]	1151	2.95*	Monoterpene
para-Cymene	5.32*	1035	[62.20]	0.90	1207	3.68*	Monoterpene
cis- β -Ocimene	5.37	1038	0.02	1.65	1188	3.43*	Monoterpene
trans- β -Ocimene	5.55	1048	0.02	[0.90]	1207	3.68*	Monoterpene
γ -Terpinene	5.74	1058	1.54	[1.65]	1188	3.43*	Monoterpene
Terpinolene	6.21	1084	1.17	1.12	1222	3.91	Monoterpene
para-Cymenene	6.44	1096	0.04	0.05	1362	6.03	Monoterpene
Linalool	6.74	1108	2.98	2.93	1486	8.63	Monoterp. alcohol
endo-Fenchol	7.19	1124	0.02	2.91	1521	9.60*	Monoterp. alcohol
Borneol	8.67	1178	0.30	12.76	1618	13.28*	Monoterp. alcohol
Terpinen-4-ol	8.85	1184	1.15	[2.91]	1521	9.60*	Monoterp. alcohol
α -Terpineol	9.66	1208	12.06	[12.76]	1618	13.28*	Monoterp. alcohol
Geraniol	11.92	1257	0.34	0.36	1771	22.10	Monoterp. alcohol
α -Ylangene	17.28*	1351	0.22	[0.42]	1425	7.17*	Sesquiterpene
Eugenol	17.28*	1351	[0.22]	0.08	2043	37.90	Phenylpropanoid
α -Copaene	17.75	1358	0.18	[0.42]	1425	7.17*	Sesquiterpene
β -Elemene	18.98	1376	0.04	[2.91]	1521	9.60*	Sesquiterpene
Geranyl acetate	19.39	1383	0.08	0.05	1685	16.77	Monoterp. ester
β -Caryophyllene	20.68	1401	1.85	[2.91]	1521	9.60*	Sesquiterpene
Aromadendrene	22.14	1419	0.07	[2.91]	1521	9.60*	Sesquiterpene
6,9-Guaiadiene	22.63	1424	0.04	0.06	1546	10.50	Sesquiterpene
α -Humulene	23.49*	1435	1.11	1.53	1581	11.84*	Sesquiterpene
allo-Aromadendrene	23.49*	1435	[1.11]	0.10	1550	10.67	Sesquiterpene
trans-Cadina-1(6),4-diene	25.19	1455	0.16	[1.53]	1581	11.84*	Sesquiterpene
γ -Muurolene	25.39	1457	0.23	0.18	1602	12.59	Sesquiterpene
Germacrene D	25.85	1463	0.34	[12.76]	1618	13.28*	Sesquiterpene
β -Selinene	26.35	1469	1.20	1.08	1625	13.64	Sesquiterpene
Viridiflorene	26.43	1470	0.25	[12.76]	1618	13.28*	Sesquiterpene
α -Selinene	26.99	1476	1.06	1.65	1631	14.01*	Sesquiterpene
Germacrene A	27.61	1484	0.05	0.23	1678	16.42*	Sesquiterpene

δ-Amorphene	27.87	1487	0.27	[1.65]	1631	14.01*	Sesquiterpene
δ-Cadinene	29.43	1507	0.07	[0.23]	1678	16.42*	Sesquiterpene
Selina-3,7(11)-diene	30.49	1522	0.13	[0.23]	1678	16.42*	Sesquiterpene
Selina-4(15),7(11)-diene	30.79	1526	0.09	[0.23]	1678	16.42*	Sesquiterpene
Germacrene B	32.11	1544	0.16	0.19	1719	18.67	Sesquiterpene
Caryophyllene oxide	33.89	1569	0.12	0.13	1840	26.84	Sesquiterp. ether
Viridiflorol	34.76	1582	0.02	0.03	1973	35.04	Sesquiterp. alcohol
Guaiol	35.46	1592	1.00	1.02	1995	36.05	Sesquiterp. alcohol
Hinesol	36.88	1622	0.21	1.70	2100	39.70*	Sesquiterp. alcohol
γ-Eudesmol	37.04	1626	0.51	0.62	2058	38.38	Sesquiterp. alcohol
β-Eudesmol	38.00	1649	1.49	[1.70]	2100	39.70*	Sesquiterp. alcohol
α-Eudesmol	38.14	1653	0.11	0.10	2123	40.39	Sesquiterp. alcohol
Bulnesol	38.44	1660	0.20	[1.70]	2100	39.70*	Sesquiterp. alcohol
Total identified			98.53%	98.89%			

*: 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

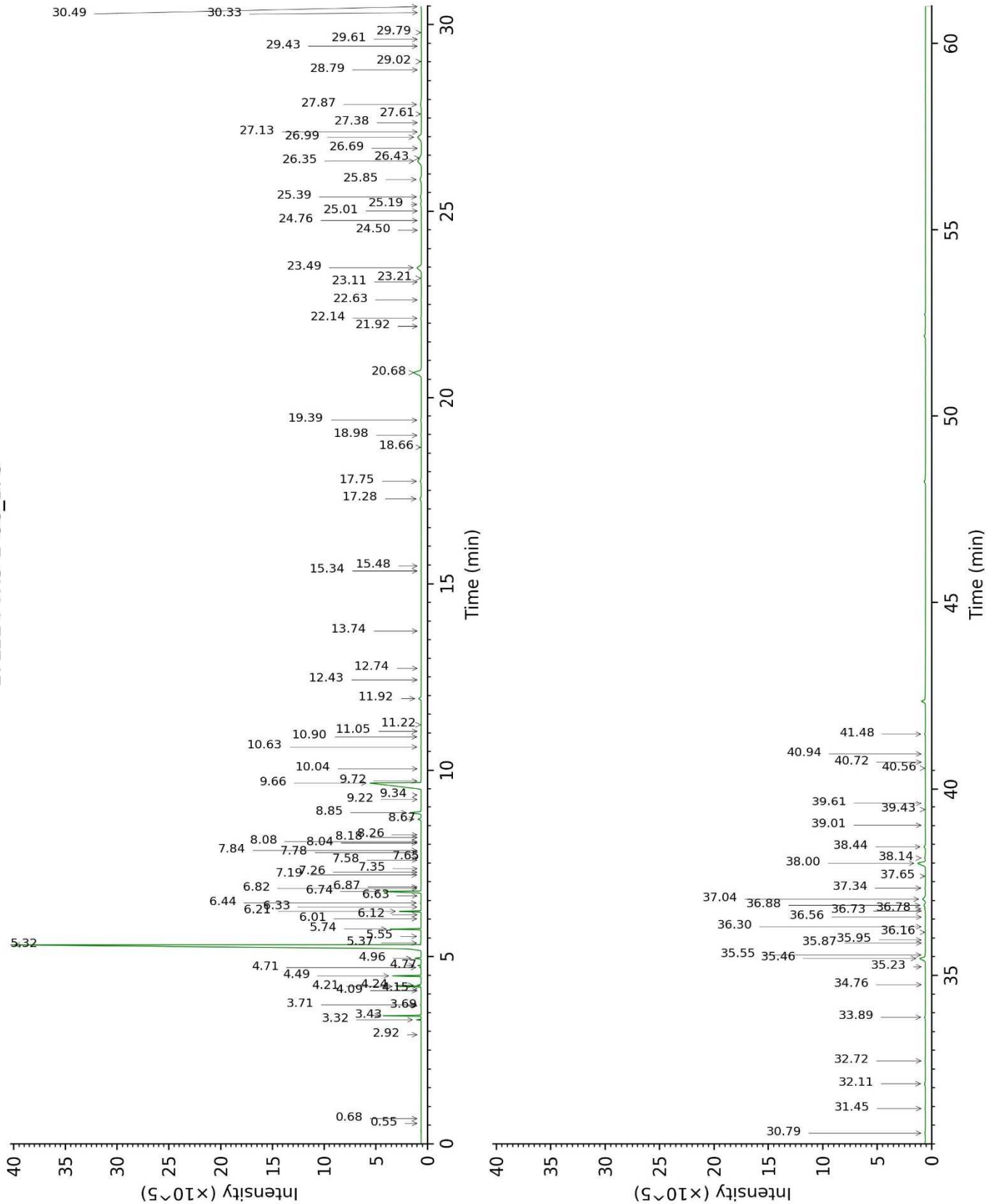
Physical aspect : Faintly yellow liquid

Refractive index : 1.4683 ± 0.0003 (20 °C)

CONCLUSION

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

17L11-PTH5-1-CC_BP5



17L11-PTH5-1-CC_WAX

