



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: E10107

ESSENTIAL OIL: EUCALYPTUS LEMON ORGANIC
BOTANICAL NAME: CORYMBIA CITRIODORA
ORIGIN: AUSTRALIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF LEMON EUCALYPTUS ORGANIC OIL	%
CITRONELLAL	75.5
CITRONELLOL	8.3
ISOPULEGOL	3.8
iso-ISOPULEGOL	2.0
CITRONELLYL ACETATE	1.1

Comments from Robert Tisserand: Radiant, lemon-mint-eucalyptus odor quality. Constituents are in expected amounts.

Date : October 3, 2017

SAMPLE IDENTIFICATION

Internal code : 17J02-PTH7-1-CC

Customer identification : Eucalyptus Lemon Organic - Australia - E1010777R

Type : Essential oil

Source : *Corymbia citriodora*

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 : Benoit Roger Ph. D.

Analysis date : 2017-10-03

Checked and approved by :

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

Note: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.

This report is digitally signed, it is only considered valid if the digital signature is intact.

IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
Isobutyl isobutyrate	3.23	915	0.08	0.72	1031	1.83*	Aliphatic ester
α-Thujene	3.30	920	0.03				Monoterpene
α-Pinene	3.41	926	0.27	0.27	934	1.17	Monoterpene
Sabinene	4.13	968	0.13	0.19	1051	2.00	Monoterpene
β-Pinene	4.19	972	0.70	[0.72]	1031	1.83*	Monoterpene
Myrcene	4.47	988	0.19	0.23	1109	2.60*	Monoterpene
α-Phellandrene	4.75	1004	0.02	[0.23]	1109	2.60*	Monoterpene
α-Terpinene	4.94	1015	0.05	[0.23]	1109	2.60*	Monoterpene
para-Cymene	5.13	1025	0.02	0.03	1200	3.76	Monoterpene
Limonene	5.16*	1027	0.24	1.67	1138	2.97*	Monoterpene
β-Phellandrene	5.16*	1027	[0.24]	[1.67]	1138	2.97*	Monoterpene
1,8-Cineole	5.22	1030	1.37	[1.67]	1138	2.97*	Monoterp. ether
cis-β-Ocimene	5.35	1037	0.23	0.37	1180	3.56*	Monoterpene
trans-β-Ocimene	5.53	1047	0.05	0.10	1206	3.84*	Monoterpene
Bergamal	5.72*	1057	0.24	0.13	1290	5.10*	Aliphatic aldehyde
γ-Terpinene	5.72*	1057	[0.24]	[0.37]	1180	3.56*	Monoterpene
para-Mentha-3,8-diene	5.97	1071	0.06	[0.10]	1206	3.84*	Monoterpene
Terpinolene	6.19	1083	0.12	0.13	1221	4.08	Monoterpene
Linalool	6.69	1106	0.29	4.21	1491	9.08*	Monoterp. alcohol
cis-Rose oxide	6.79	1110	0.05	[0.13]	1290	5.10*	Monoterp. ether
trans-Rose oxide	7.15	1123	0.02	0.02	1303	5.30	Monoterp. ether
Isopulegol	7.86	1149	3.75	[4.21]	1491	9.08*	Monoterp. alcohol
Citronellal	8.21*	1161	77.57	75.46	1422	7.40	Monoterp. aldehyde
iso-Isopulegol	8.21*	1161	[77.57]	2.00	1480	8.81	Monoterp. alcohol
neoiso-Isopulegol	8.47	1171	0.25				Monoterp. alcohol
Borneol	8.70	1179	0.08	0.20	1615	13.92*	Monoterp. alcohol
Terpinen-4-ol	8.83	1183	0.04	0.31	1534	10.64	Monoterp. alcohol
α-Terpineol	9.47	1203	0.12	[0.20]	1615	13.92*	Monoterp. alcohol
Nerol	10.57	1228	0.05	0.05	1721	19.89	Monoterp. alcohol
Citronellol	10.95	1236	8.33	8.70	1703	18.63	Monoterp. alcohol
Geraniol	11.87	1256	0.15	0.09	1772	23.33	Monoterp. alcohol
Geranial	12.70	1274	0.05	0.09	1639	15.19	Monoterp. aldehyde
Citronellyl acetate	17.25*	1350	1.34	1.06	1599	13.11	Monoterp. ester
Citronellic acid	17.25*	1350	[1.34]	0.44	2169	42.14	Monoterp. acid
para-Menthane-3,8-diol isomer I	17.47	1354	0.64				Monoterp. alcohol
Eugenol	17.62	1356	0.08	0.08	2050	38.77	Phenylpropanoid
Geranyl acetate	19.35*	1382	0.31	0.06	1686	17.74	Monoterp. ester
para-Menthane-3,8-diol isomer II	19.35*	1382	[0.31]				Monoterp. alcohol
(Z)-Jasmone	20.23	1395	0.12	0.06	1815	26.26	Jasmonate

β-Caryophyllene	20.60	1400	0.83	0.96	1514	9.88	Sesquiterpene
α-Humulene	23.38	1433	0.06	0.06	1576	12.21	Sesquiterpene
Germacrene D	25.60	1460	0.06	[0.20]	1615	13.92*	Sesquiterpene
Bicyclogermacrene	26.84	1475	0.06	0.06	1633	14.90	Sesquiterpene
δ-Cadinene	29.33	1505	0.09	0.07	1668	16.73	Sesquiterpene
Unknown (m/z = 69, 41 (38), 81 (33), 121 (32), 83 (31)... 210? (4))	45.15	1870	0.04				
Unknown (m/z = 81, 121 (77), 93 (75), 69 (74), 41 (53), 205 (51)... 290 (25))	45.20	1872	0.05				
Unknown (m/z = 81, 93 (81), 69 (76), 121 (75), 205 (68), 41 (55)... 290 (27))	45.37	1878	0.02				
Unknown (m/z = 137, 81 (97), 95 (51), 69 (47), 41 (36), 154 (35), 121 (31)...))	46.46	1920	0.48	0.53	2093	40.13	
Unknown (m/z = 81, 205 (67), 121 (55), 69 (55), 93 (53), 41 (44)... 290? (8))	47.44	1959	0.06				
Unknown (m/z = 81, 137 (72), 69 (61), 95 (48), 41 (36)...))	47.54	1963	0.03				
Unknown (m/z = 137, 81 (97), 69 (67), 95 (52), 41 (42), 183 (32)...))	47.79	1973	0.11				
Unknown (m/z = 81, 137 (58), 95 (57), 69 (55)... 223 (14)...))	50.07	2070	0.04				
Unknown (m/z = 81, 69 (81), 43 (70), 95 (66), 139 (52), 109 (49), 137 (48), 41 (47), 55 (45)...))	51.31	2124	0.01				
Total identified			98.17%	97.82%			

*: 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

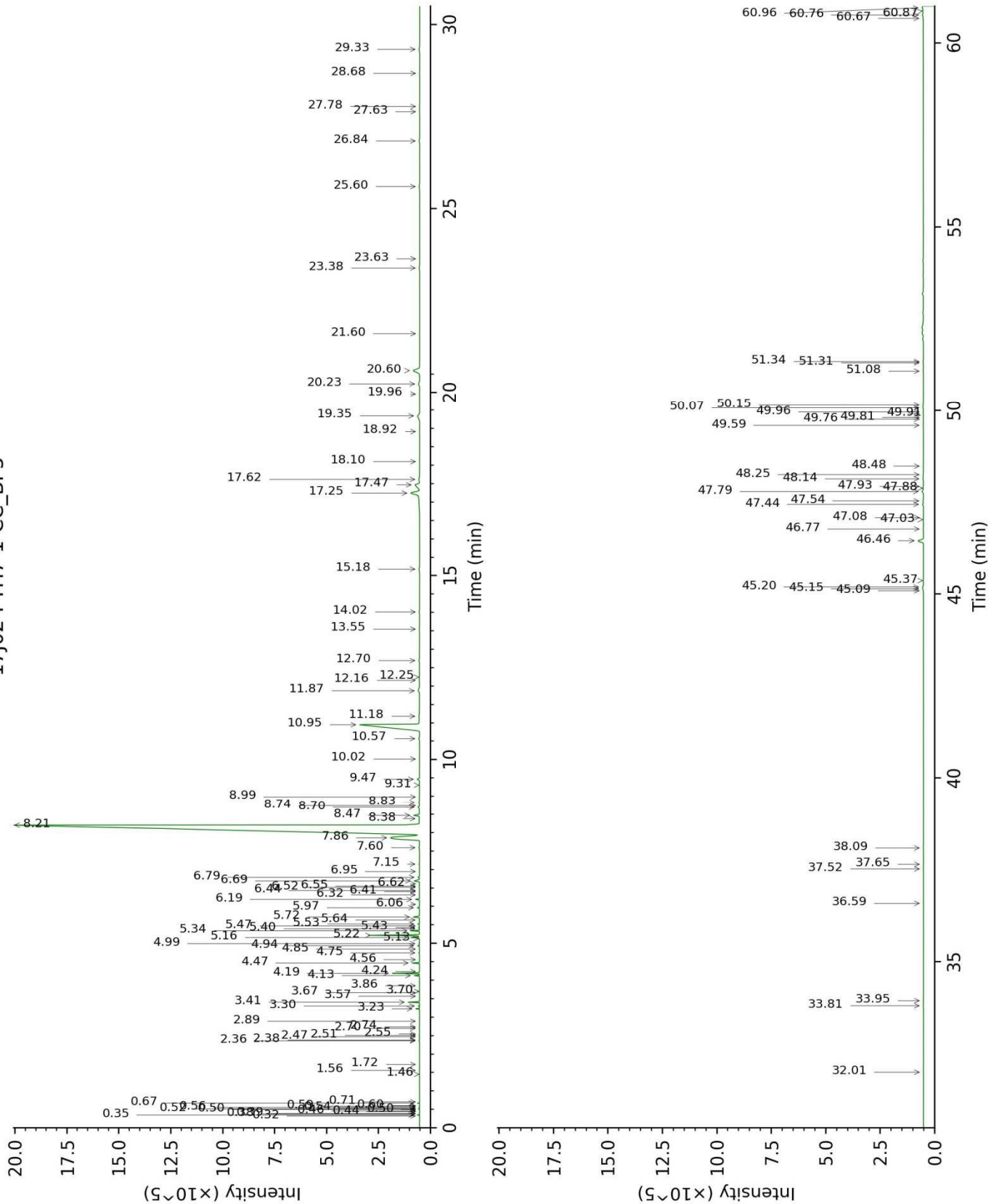
Physical aspect : Clear liquid

Refractive index : 1.4530 ± 0.0003 (20 °C)

CONCLUSION

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

17J02-PTH7-1-CC_BP5



17J02-PTH7-1-CC_WAX

