



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: LU0100

ESSENTIAL OIL: LEMON TEA TREE
BOTANICAL NAME: LEPTOSPERMUM PETERSONII
ORIGIN: AUSTRALIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF LEMON TEA TREE OIL	%
Geranial	39.39
Neral	27.78
Citronellal	19.12
Citronellol	4.31
Geraniol	1.88

Comments from Robert Tisserand: Fresh, green, lemon-citronella odor quality. Constituents are in expected amounts.

Date : August 28, 2017

SAMPLE IDENTIFICATION

Internal code : 17H28-PTH1-1-DM

Customer identification : Lemon Scented Tea Tree - Australia - LU010077R

Type : Essential oil

Source : *Leptospermum petersonii*

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 : 2017-08-28

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.	
Isobutyl isobutyrate	3.24	916	0.02	0.01	1033	1.84	Aliphatic ester
α-Thujene	3.32	920	0.01	0.07	944	1.22*	Monoterpene
α-Pinene	3.42	927	0.08	[0.07]	944	1.22*	Monoterpene
Sabinene	4.14	969	0.03	0.02	1059	2.06	Monoterpene
β-Pinene	4.20	973	0.18	0.18	1040	1.89	Monoterpene
Myrcene	4.48	989	0.04	0.03	1114	2.67*	Monoterpene
α-Phellandrene	4.75	1005	0.01	[0.03]	1114	2.67*	Monoterpene
α-Terpinene	4.95	1015	0.01	[0.03]	1114	2.67*	Monoterpene
para-Cymene	5.17	1027	0.05	0.03	1211	3.92	Monoterpene
Limonene	5.20	1029	tr	0.26	1144	3.05*	Monoterpene
1,8-Cineole	5.23	1031	0.20	[0.26]	1144	3.05*	Monoterp. ether
cis-β-Ocimene	5.35	1037	0.04	0.08	1192	3.63*	Monoterpene
trans-β-Ocimene	5.53	1047	0.01	0.01	1205	3.83	Monoterpene
Bergamal	5.73*	1058	0.08	0.07	1295	5.18	Aliphatic aldehyde
γ-Terpinene	5.73*	1058	[0.08]	[0.08]	1192	3.63*	Monoterpene
para-Mentha-3,8-diene	5.97	1071	0.03				Monoterpene
Linalool	6.70	1106	0.10	1.53	1496	9.22*	Monoterp. alcohol
exo-Isocitral	7.73	1144	0.04	0.09	1432	7.66	Monoterp. aldehyde
Isopulegol	7.84	1148	1.39	[1.53]	1496	9.22*	Monoterp. alcohol
Citronellal	8.08	1156	19.12	18.58	1420	7.37	Monoterp. aldehyde
iso-Isopulegol	8.11	1157	0.55	0.82	1485	8.94*	Monoterp. alcohol
(Z)-Isocitral	8.27	1163	0.11	[0.82]	1485	8.94*	Monoterp. aldehyde
Borneol	8.65	1177	0.05	0.40	1620	14.21*	Monoterp. alcohol
(E)-Isocitral	8.87	1185	0.21	0.18	1505	9.56	Monoterp. aldehyde
α-Terpineol	9.48	1203	0.30	[0.40]	1620	14.21*	Monoterp. alcohol
Citronellol	11.09	1239	4.31	4.35	1707	18.96*	Monoterp. alcohol
Neral	11.42	1246	27.78	28.28	1604	13.34*	Monoterp. aldehyde
Geraniol	12.12	1262	1.88	2.01	1779	23.80	Monoterp. alcohol
Geranial	13.05	1282	39.39	39.73	1653	15.94*	Monoterp. aldehyde
Unknown (m/z = 82, 59 (44), 41 (40), 95 (31)...))	16.86	1344	0.08	0.05	1852	29.07	
Citronellic acid	17.11	1348	0.11	0.15	2179	42.40	Monoterp. acid
Citronellyl acetate	17.25	1350	0.34	[28.28]	1604	13.34*	Monoterp. ester
para-Menthane-3,8-diol isomer I	17.46	1354	0.23				Monoterp. alcohol
β-Elemene	18.94	1376	0.09	1.24	1519	10.06*	Sesquiterpene
Geranyl acetate	19.37	1382	0.21	[4.35]	1707	18.96*	Monoterp. ester
Geranic acid	19.53	1385	0.11	0.14	2257	44.30	Monoterp. acid
β-Caryophyllene	20.62	1400	1.11	[1.24]	1519	10.06*	Sesquiterpene
α-Humulene	23.38	1433	0.08	0.08	1584	12.51	Sesquiterpene
Bicyclgermacrene	26.84	1475	0.11	[39.73]	1653	15.94*	Sesquiterpene

(E,E)- α -Farnesene	29.33	1505	0.03	0.05	1691	17.99	Sesquiterpene
Caryophyllene oxide	33.81	1568	0.08	0.06	1843	28.35	Sesquiterp. ether
Spathulenol	33.96	1571	0.02	0.02	2013	37.57	Sesquiterp. alcohol
Humulene epoxide II	35.21	1588	0.07	0.08	1901	32.59	Sesquiterp. ether
Unknown (m/z = 137, 81 (97), 95 (51), 69 (47), 41 (36), 154 (35), 121 (31)...))	46.42	1919	0.30	0.34	2098	40.28	
Total identified			98.61%	98.55%			

*: 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

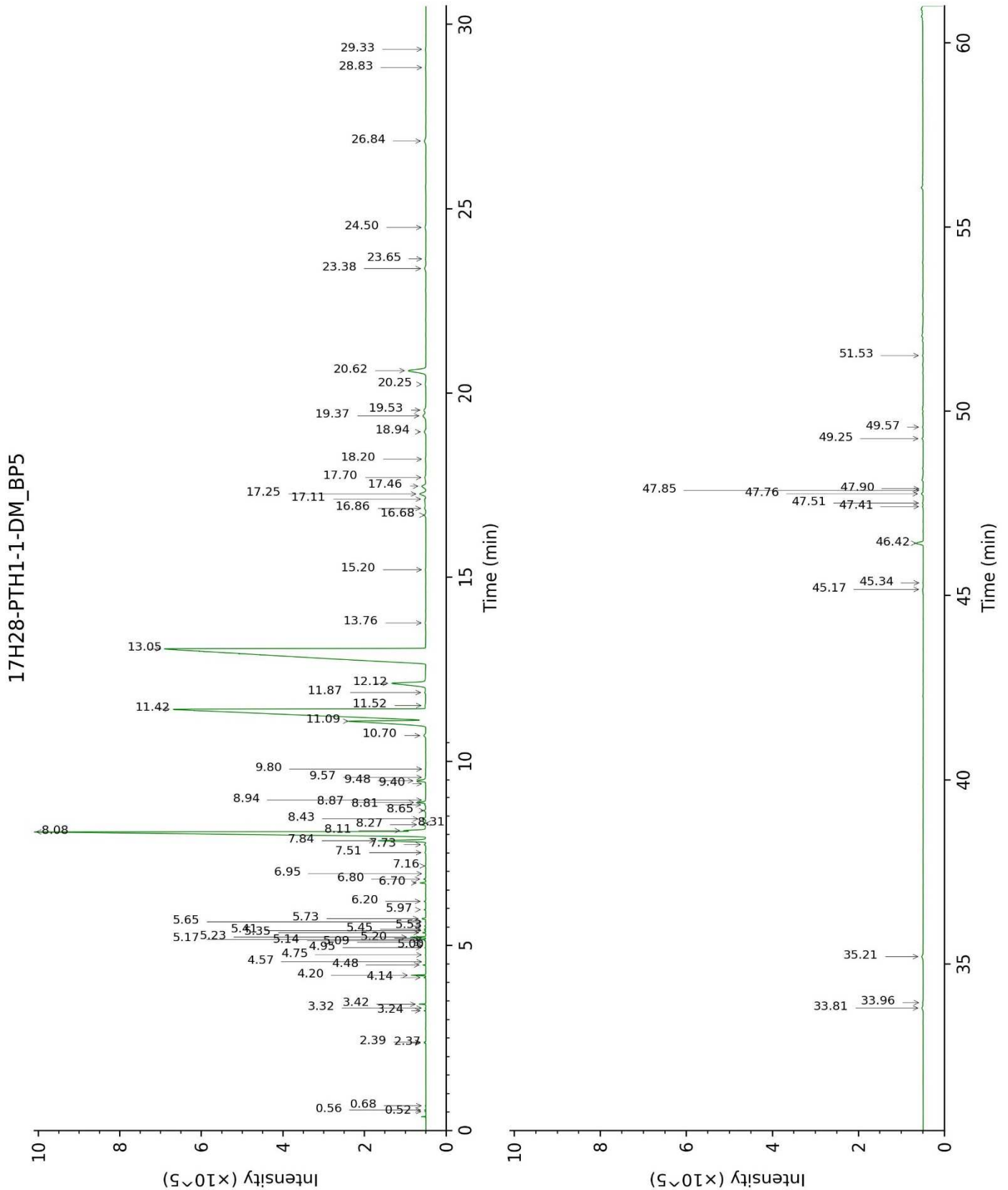
OTHER DATA

Physical aspect : Clear liquid

Refractive index : 1.4775 \pm 0.0003 (20 °C)

CONCLUSION

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



17H28-PTH1-1-DM_WAX

