



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: EE0101

ESSENTIAL OIL: ELEMI

BOTANICAL NAME: CANARIUM LUZONICUM

ORIGIN: PHILLIPINES

KEY CONSTITUENTS PRESENT IN THIS BATCH OF ELEMI OIL	%
LIMONENE	48.9
α -PHELLANDRENE	15.0
α -ELEMOL	9.2
SABINENE	4.9
ELEMICIN	4.1
TERPINOLENE	3.0
1,8-CINEOLE	2.4
p-CYMENE	2.0
α -TERPINEOL	1.5

Comments from Robert Tisserand: Excellent fresh, conifer-by-the-sea odor profile. All six key ISO constituents are within range

Date : April 7, 2017

SAMPLE IDENTIFICATION

Internal code : 17C29-PTH5-1-DM

Customer identification : Elemi - Philippines - EE010171R

Type : Essential oil

Source : *Canarium luzonicum*

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 : 2017-04-06

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Note: This report may not be published, including online, without the written consent from Laboratoire PhytoChemia.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.	
α -Thujene	3.30	922	0.14	0.15	951	1.19	Monoterpene
α -Pinene	3.40	928	0.56	0.54	939	1.14	Monoterpene
Camphene	3.69	945	0.02	0.02	994	1.43	Monoterpene
Sabinene	4.13	971	4.86	4.82	1056	1.97	Monoterpene
β -Pinene	4.18	974	0.21	0.20	1035	1.78	Monoterpene
Myrcene	4.46	991	0.64	0.75	1114	2.54	Monoterpene
α -Phellandrene	4.77*	1008	15.10	14.97	1110	2.49	Monoterpene
Δ^3 -Carene	4.77*	1008	[15.10]	0.03	1084	2.26	Monoterpene
α -Terpinene	4.92	1017	0.50	0.49	1120	2.62	Monoterpene
Limonene	5.24*	1034	53.24	48.87	1147	2.97	Monoterpene
1,8-Cineole	5.24*	1034	[53.24]	2.36	1149	3.00	Monoterp. ether
para-Cymene	5.24*	1034	[53.24]	2.03	1206	3.76	Monoterpene
cis- β -Ocimene	5.33	1039	0.29	0.25	1183	3.45	Monoterpene
trans- β -Ocimene	5.51	1049	0.21	0.20	1199	3.65	Monoterpene
γ -Terpinene	5.69	1059	0.35	0.38	1185	3.48	Monoterpene
cis-Sabinene hydrate	5.98	1075	0.12	0.14	1404	6.77	Monoterp. alcohol
Terpinolene	6.18	1085	3.02	3.00	1221	3.98	Monoterpene
para-Cymenene	6.35	1095	0.16	0.15	1362	6.13	Monoterpene
trans-para-Mentha-2,8-dien-1-ol	7.11	1124	0.06	0.06	1550	10.87	Monoterp. alcohol
cis-para-Mentha-2,8-dien-1-ol	7.47	1138	0.04	0.03	1610	13.05	Monoterp. alcohol
Unknown (m/z = 95, 110 (41), 81 (21), 67 (19), 41 (16)... 152 (9))	8.35	1170	0.12				Oxygenated monoterpene
Unknown (m/z = 95, 110 (47), 81 (28), 79 (16), 41 (15)... 152 (10))	8.50	1175	0.17				Oxygenated monoterpene
Terpinen-4-ol	8.65	1181	0.58	0.54	1524	9.88	Monoterp. alcohol
para-Cymen-8-ol	9.11	1198	0.31	0.31	1763	21.76	Monoterp. alcohol
α -Terpineol	9.28	1202	1.52	1.64	1621	13.63*	Monoterp. alcohol
α -Phellandrene epoxide	9.51	1207	0.28	0.32	1717	18.71	Monoterpene
trans-Carveol	10.19	1223	0.05	0.06	1751	20.96	Monoterp. alcohol
Carvone	11.20	1245	0.05	0.05	1639	14.54	Monoterp. ketone
Piperitone	11.58	1253	0.25	[1.64]	1621	13.63*	Monoterp. ketone
α -Copaene	17.53	1358	0.11	0.10	1424	7.26	Sesquiterpene
β -Elemene	18.71	1376	0.08	0.08	1518	9.63	Sesquiterpene
β -Caryophyllene	20.36	1401	0.13	0.14	1514	9.49	Sesquiterpene
Methyleugenol	21.18	1411	0.31	0.30	1930	33.19	Phenylpropanoid
α -Humulene	23.11	1434	0.11	0.11	1574	11.72	Sesquiterpene
Germacrene D	25.29	1460	0.11	0.10	1615	13.33	Sesquiterpene

α-Muurolene	27.31	1485	0.02	0.01	1656	15.49	Sesquiterpene
δ-Cadinene	28.99	1506	0.05	0.05	1661	15.75	Sesquiterpene
α-Elemol	32.36	1553	9.24	9.62	1995	36.13	Sesquiterp. alcohol
Elemicin	33.64	1570	4.05	4.17	2141	40.92	Phenylpropanoid
Guaiol	35.00	1589	0.14	0.14	1999	36.29	Sesquiterp. alcohol
γ-Eudesmol	36.61	1621	0.37	0.39	2063	38.58	Sesquiterp. alcohol
β-Eudesmol	37.54*	1643	0.46	0.29	2104	39.86	Sesquiterp. alcohol
α-Eudesmol	37.54*	1643	[0.46]	0.28	2107	39.96	Sesquiterp. alcohol
Dimer of α-phellandrene III	42.19	1774	0.07				Diterpene
Cryptomeridiol isomer	42.51	1784	0.01				Sesquiterp. alcohol
Cryptomeridiol	43.70	1825	0.01				Sesquiterp. alcohol
Total identified			97.83%	98.14%			

*: 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 : 1.4783 ± 0.0003 (20 °C)

CONCLUSION

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



