



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: Y10104

ESSENTIAL OIL: YLANG YLANG COMPLETE
BOTANICAL NAME: CANANGA ODORATA
ORIGIN: COMOROS

KEY CONSTITUENTS PRESENT IN THIS BATCH OF YLANG YLANG COMPLETE OIL	%
GERMACRENE D	25.0
(E,E)- α -FARNESENE	19.3
β -CARYOPHYLLENE	6.7
BENZYL BENZOATE	6.3
(2E,6E)-FARNESYL ACETATE	4.2
BENZYL SALICYLATE	3.9
BENZYL ACETATE	3.0
LINALOOL	2.6
δ -CADINENE	2.6
GERANYL ACETATE	2.5
α -HUMULENE	2.0
(E)-CINNAMYL ACETATE	1.8
(2E,6E)-FARNESOL	1.7
para-METHYLANISOLE	1.6
α -CADINOL	1.6
α -AMORPHENE	1.4
α -COPAENE	1.4

METHYL BENZOATE	1.1
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Comments from Robert Tisserand: A very nice buttery Ylang-ylang complete oil, and the lab report looks fine.

Date : September 2, 2016

SAMPLE IDENTIFICATION

Internal code : 16H23-PTH4-1-DM

Customer identification : Ylang Complete - Y1010463

Type : Essential oil

Source : *Cananga odorata*

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 : 2016-09-02

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.	
Isoamyl acetate	2.65	877	0.01	0.01	1058	1.52	Aliphatic ester
3-Methyl-3-buten-1-yl acetate	2.76	885	0.13	0.13	1134	2.20	Aliphatic ester
α -Pinene	3.35	924	0.20	0.20	946	0.86	Monoterpene
Prenyl acetate	3.38	926	0.23	0.23	1192	2.89	Aliphatic ester
Camphene	3.64	942	tr	tr	1008	1.12	Monoterpene
β -Pinene	4.13	971	0.06	0.05	1039	1.36	Monoterpene
Myrcene	4.41	988	0.04	0.04	1115	1.98	Monoterpene
6-Methyl-5-hepten-2-one	4.50	993	0.01	0.01	1274	3.97	Aliphatic ketone
<i>cis</i> -Hex-3-en-1-yl acetate	4.82	1012	0.03	0.03	1258	3.75	Aliphatic ester
Hexyl acetate	4.94	1018	0.05	0.05	1221	3.23	Aliphatic ester
para-Methylanisole	5.11	1028	1.62	1.66	1363	5.22	Simple phenolic
Limonene	5.15	1030	0.06	0.05	1143	2.32	Monoterpene
<i>cis</i> - β -Ocimene	5.28	1037	tr	0.01	1185	2.80	Monoterpene
<i>trans</i> - β -Ocimene	5.46	1047	0.01	0.01	1201	2.99	Monoterpene
Benzyl alcohol	5.77	1064	0.05	0.07	1776	18.28	Simple phenolic
<i>cis</i> -Linalool oxide (fur.)	5.94	1073	0.01	0.01	1393	5.66	Monoterp. alcohol
Methyl benzoate	6.53	1102	1.09	8.42	1529	8.19*	Phenolic ester
Linalool	6.67	1108	2.56	2.61	1493	7.43	Monoterp. alcohol
Nonanal	6.70	1109	0.01	0.01	1338	4.87	Aliphatic aldehyde
Benzyl acetate	8.36	1171	2.97	2.23	1639	11.61*	Phenolic ester
Ethyl benzoate	8.48	1175	0.03	0.05	1572	9.46	Phenolic ester
α -Terpineol	9.35	1203	0.08	[2.23]	1639	11.61*	Monoterp. alcohol
Phenylethyl acetate	11.83	1259	0.20	0.13	1734	15.85	Phenolic ester
Prenyl hexanoate	13.32	1292	0.10	[8.42]	1529	8.19*	Aliphatic ester
1-Nitro-2-phenylethane	14.56	1312	0.05				Simple phenolic
δ -Elemene	15.06	1319	0.14	0.08	1427	6.17	Sesquiterpene
α -Cubebene	15.70	1329	0.17	0.18	1416	5.98	Sesquiterpene
Benzyl butyrate	16.91*	1348	0.13	0.08	1853	22.97	Phenolic ester
α -Ylangene	16.91*	1348	[0.13]	0.06	1424	6.12	Sesquiterpene
α -Copaene	17.41	1356	1.36	1.35	1439	6.41	Sesquiterpene
Eugenol	17.59	1358	0.07	0.10	2061	35.58	Phenylpropanoid
β -Cubebene	18.37	1370	0.24	0.20	1480	7.18	Sesquiterpene
β -Elemene	18.63	1374	0.39	[8.42]	1529	8.19*	Sesquiterpene
Geranyl acetate	19.22	1383	2.48	2.46	1695	14.09*	Monoterp. ester
β -Caryophyllene	20.37	1400	6.69	[8.42]	1529	8.19*	Sesquiterpene
β -Copaene	21.17	1409	0.27	0.16	1510	7.74	Sesquiterpene
<i>trans</i> - α -Bergamotene	21.81	1417	0.02	[8.42]	1529	8.19*	Sesquiterpene
<i>cis</i> -Muurolo-3,5-diene	22.63*	1427	0.21	0.11	1560	9.08	Sesquiterpene
<i>cis</i> - β -Farnesene	22.63*	1427	[0.21]	0.05	1581	9.73	Sesquiterpene
α -Humulene	23.07	1432	2.04	2.24	1589	9.95	Sesquiterpene

allo-Aromadendrene	23.69	1440	0.13	0.09	1568	9.33	Sesquiterpene
(E)-Isoeugenol	24.71	1452	0.15	0.15	2249	41.18	Phenylpropanoid
(E)-Cinnamyl acetate	25.02	1456	1.81	1.81	2042	34.84	Phenylpropanoid ester
Germacrene D	25.59*	1463	25.96	24.97	1638	11.56*	Sesquiterpene
α-Amorphene	25.59*	1463	[25.96]	1.40	1622	10.94	Sesquiterpene
β-Selinene	26.08	1469	0.21	[24.97]	1638	11.56*	Sesquiterpene
Bicyclogermacrene	26.53*	1473	0.91	0.37	1646	11.94	Sesquiterpene
α-Selinene	26.53*	1473	[0.91]	0.46	1642	11.78	Sesquiterpene
α-Muurolene	27.28	1482	0.71	0.47	1650	12.13	Sesquiterpene
δ-Guaiene	27.41	1484	0.24	[24.97]	1638	11.56*	Sesquiterpene
(Z,E)-α-Farnesene	27.98	1491	0.23	2.86	1682	13.55*	Sesquiterpene
γ-Cadinene	28.30	1495	0.68	0.57	1676	13.27	Sesquiterpene
(E,E)-α-Farnesene	29.14*	1506	21.97	19.32	1708	14.64	Sesquiterpene
δ-Cadinene	29.14*	1506	[21.97]	[2.86]	1682	13.55*	Sesquiterpene
β-Bisabolene	29.14*	1506	[21.97]	0.66	1654	12.31	Sesquiterpene
trans-Cadina-1,4-diene	30.14	1520	0.15	[2.46]	1695	14.09*	Sesquiterpene
α-Cadinene	30.47	1524	0.19	0.18	1712	14.86	Sesquiterpene
α-Elemol	32.12	1547	0.04	0.03	2007	32.82	Sesquiterp. alcohol
Caryophyllene oxide	33.52*	1566	0.12	0.06	1851	22.81	Sesquiterp. ether
Spathulenol	33.52*	1566	[0.12]	0.13	2014	33.21	Sesquiterp. alcohol
(E)-Nerolidol	33.70	1569	0.13	0.12	1993	31.98	Sesquiterp. alcohol
Viridiflorol	34.60	1581	0.05	0.05	1990	31.79	Sesquiterp. alcohol
Guaiol	35.16	1589	0.11	0.10	2000	32.39	Sesquiterp. alcohol
Junenol	35.72	1598	0.41	0.30	1930	28.20	Sesquiterp. alcohol
1,10-diepi-Cubenol	36.41	1615	0.22	0.34	1955	29.81*	Sesquiterp. alcohol
1-epi-Cubenol	36.80	1624	0.11	0.21	1961	30.17	Sesquiterp. alcohol
Cubenol	37.02	1629	0.14	[0.34]	1955	29.81*	Sesquiterp. alcohol
τ-Cadinol	37.34	1637	0.47	0.47	2081	36.24	Sesquiterp. alcohol
τ-Muurolol	37.48	1641	0.80	0.78	2097	36.80	Sesquiterp. alcohol
α-Muurolol	37.60	1643	0.30	0.33	2112	37.33	Sesquiterp. alcohol
Himachalol	37.75	1647	0.24	0.28	2102	36.95	Sesquiterp. alcohol
α-Cadinol	37.95	1652	1.56	1.53	2136	38.12	Sesquiterp. alcohol
(2Z,6Z)-Farnesol	38.50	1665	0.15	4.16	2211	40.18*	Sesquiterp. alcohol
(2E,6Z)-Farnesol	39.19	1681	0.10				Sesquiterp. alcohol
(2E,6E)-Farnesol	40.65	1723	1.73	1.87	2303	42.40	Sesquiterp. alcohol
Benzyl benzoate	42.25	1773	6.29	6.37	2496	46.43	Phenolic ester
(2E,6E)-Farnesyl acetate	44.10	1838	4.18	[4.16]	2211	40.18*	Sesquiterp. ester
Benzyl salicylate	45.11	1874	3.87	3.88	2646	49.21	Phenolic ester
Total identified			98.17%	97.40%			

*: 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 : Light yellow liquid

Refractive index : 1.5063 ± 0.0003 (20 °C)

CONCLUSION

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

