

GC/MS BATCH NUMBER: Y10102

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

KEY CONSTITUENTS PRESENT IN THIS BATCH OF YLANG YLANG COMPLETE OIL	%
GERMACRENE D	15.4
β -CARYOPHYLLENE	15.0
BENZYL BENZOATE	7.5
(E,E)- α -FARNESENE	6.8
LINALOOL	6.3
GERANYL ACETATE	6.1
α -HUMULENE	4.2
Δ -CADINENE	3.6
p-METHYL-CRESOL	2.8
γ -MUUROLENE	2.3
FARNESOL	2.3
FARNESYL ACETATE	2.0
α -CADINOL	1.9
(Z,E)- α -FARNESENE	1.9
BENZYL SALICYLATE	1.8
METHYL BENZOATE	1.4
α -MUUROLENE	1.3
GERANIOL	1.3
GERANIAL	1.2

α -COPAENE	1.1
-------------------	-----

Comments from Robert Tisserand: This is a beautifully rich Ylang-Ylang oil and the composition looks good.

Customer :

**PLANT THERAPY
126 Locust Street South
Twin Falls, ID 83 301
USA**

Sample nature: ESSENTIAL OIL
Botanical name: CANANGA ODORATA COMPLETE
Reference name: YLANG YLANG COMPLETE
Batch number: Y10102
Origin: MADAGASCAR
Part: FLOWER
Pyrenessences reference: E002
Date of reception: 06/15/2015
Date analysis: 06/29/2015
Packaging: Amber flask of 5 ml - ambient temperature
Wanted analysis: Classic

Report validated by :

Daniel Dantin



GAS CHROMATOGRAPHY (norm NF ISO 11024)

Conditions :

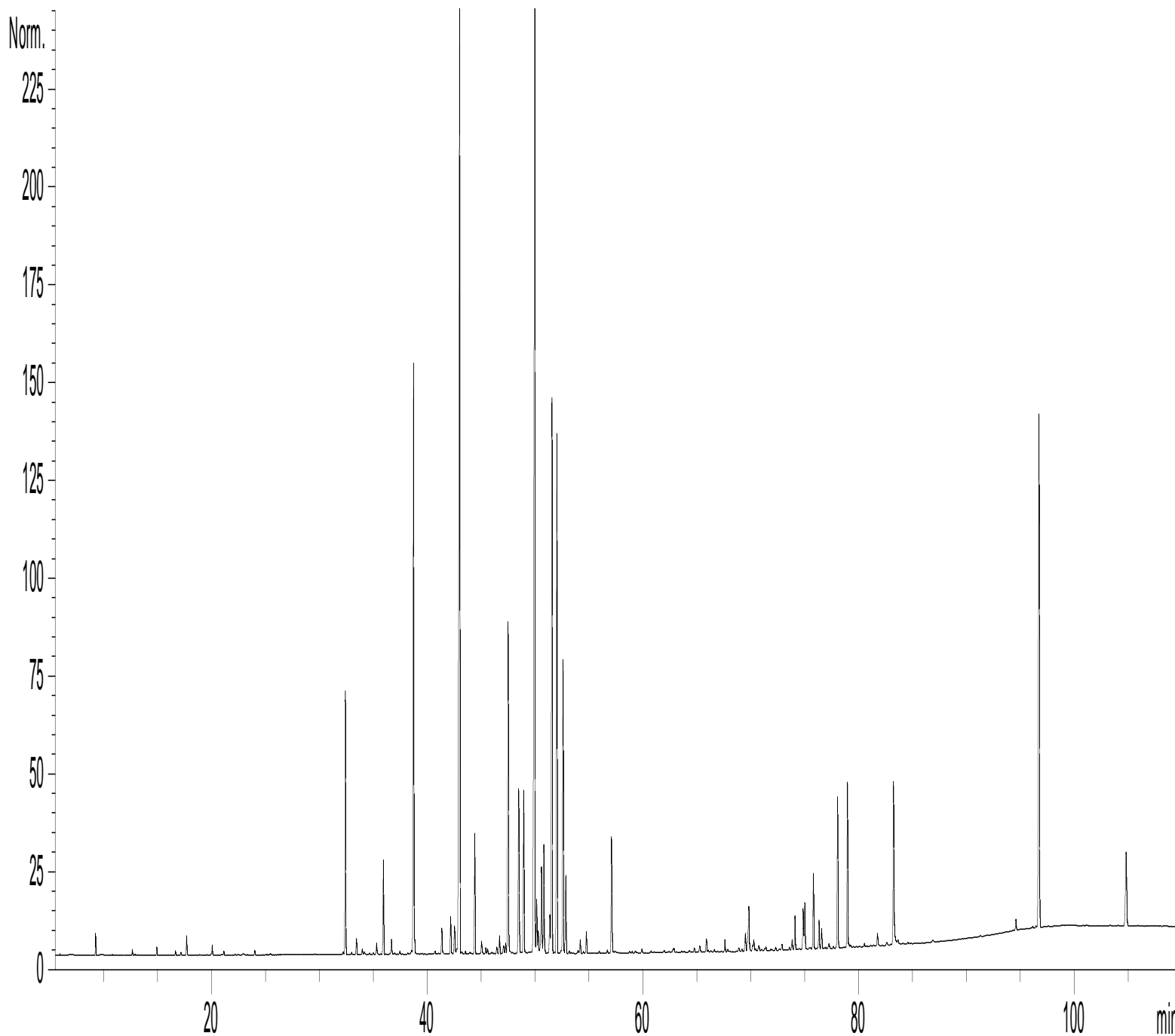
- GC: 7890 - SM : 5975 AGILENT : Column VF WAX polar : 60 m × 0,25 mm × 0,5 µm
- GC/FID 6890 AGILENT : Column VF WAX polar : 60 m × 0,25 mm × 0,5 µm
- Programmation : 6 min to 60°C – 2°C/min → 250°C – 10 min to 250°C
- Carrier gas : He 30 psi/FID ; 23 psi/MS
- Mass : 30 à 350
- Dilution: 10 % in Hexane
- Sample injection : 1 µL

Mass range : 30 to 350, Oil components are identified by a combination of retention times (our own database) and mass spectra library NIST 75 000 records,

Percentages are calculated from GC/FID peaks areas without using corrections factors,

Chromatographic profile (GC/FID) :

FID1 A, (Z:\PLANTHER\CO15E002.D)



Identification results 1 – YLANG YLANG COMPLETE BATCH N° Y10102

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)
1	9,3	α-PINENE	0,15		
2	12,6	β-PINENE	0,05		
3	12,9	ISOAMYL ACETATE	0,01		
4	13,2	SABINENE	0,01		
5	15,0	β-MYRCENE	0,07		
6	16,7	ISOPRENYL ACETATE	0,04		
7	17,2	LIMONENE	0,02		0,02
8	17,7	1,8-CINEOLE	0,19		
9	18,9	Cis-β-OCIMENE	0,01		
10	20,0	PRENYL ACETATE	0,10		
11	20,1	Trans-β-OCIMENE	0,01		
12	21,2	HEXYL ACETATE	0,03		
13	22,2	TERPINOLENE	0,01		
14	24,1	Cis-3-HEXENYL ACETATE	0,04		
15	25,5	6-METHYL-5-HEPTEN-2-ONE	0,01		
16	32,2	SESQUITERPENE	0,03		
17	32,5	METHYL-p-CRESOL	2,80		
18	33,0	SESQUITERPENE	0,01		
19	33,5	α-CUBEBENE	0,18		
20	34,0	LINALOOL Trans-OXIDE + SESQUITERPENE	0,05		
21	34,2	δ-ELEMENE	0,03		
22	34,7	SESQUITERPENE	0,01		
23	35,0	TERPENIC COMPONENT	0,02		
24	35,3	YLANGENE	0,14		
25	36,0	α-COPAENE	1,09		
26	36,6	SESQUITERPENE	0,21		
27	37,0	SESQUITERPENE	0,02		
28	37,5	BENZALDEHYDE	0,05		
29	37,7	β-BOURBONENE	0,01		
30	38,2	α-GURJUNENE	0,02		
31	38,5	SESQUITERPENE	0,05		
32	38,7	LINALOOL	6,28		6,28
33	38,8	β1-CUBEBENE	0,13		
34	39,5	LINALYL ACETATE	0,01		
35	40,7	SESQUITERPENE	0,04		
36	41,3	ε-CADINENE	0,32		
37	42,2	β-ELEMENE	0,45		
38	42,5	β-CUBEBENE	0,43		
39	43,0	β-CARYOPHYLLENE	14,95		
40	43,2	SESQUITERPENE	0,05		
41	43,5	AROMADENDRENE	0,04		
42	44,3	METHYL BENZOATE	1,38		
43	45,0	CADINA-3,5-DIENE	0,17		
44	45,4	GERMACRENE A	0,07		
45	45,6	SESQUITERPENE	0,07		

Identification results 2 – YLANG YLANG COMPLETE BATCH N° Y10102

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)
46	46,4	ZONARENE	0,08		
47	46,7	ESTRAGOLE	0,21		
48	47,1	SESQUITERPENE	0,11		
49	47,3	SESQUITERPENE	0,10		
50	47,5	α-HUMULENE	4,23		
51	47,6	Cis-4,5-MUUROLADIENE	0,03		
52	47,8	SESQUITERPENE	0,03		
53	48,5	γ-MUUROLENE	2,29		
54	48,8	SESQUITERPENE	0,10		
55	48,9	Z,E-α-FARNESENE	1,87		
56	49,9	GERMACRENE D	15,36		
57	50,1	BENZYL ACETATE	0,65		
58	50,3	CUBEBENE ISOMER	0,28		
59	50,6	GERANIAL	1,22		1,22
60	50,8	α-MUUROLENE	1,28		
61	51,4	BICYCLOGERMACRENE	0,51		
62	51,5	E,E-α-FARNESENE	6,82		
63	52,0	GERANYL ACETATE	6,05		
64	52,4	SESQUITERPENE	0,05		
65	52,6	δ-CADINENE	3,61		
66	52,9	γ-CADINENE	0,97		
67	53,2	METHYL SALICYLATE	0,06		
68	54,0	CADINA-1,4-DIENE	0,17		
69	54,2	NEROL	0,04		
70	54,7	α-AMORPHENE	0,25		
71	56,0	2-PHENYLETHYL ACETATE	0,05		
72	56,8	Trans-ANETHOLE	0,04		
73	56,8	CALAMENENE	0,20		
74	57,0	GERANIOL	1,26		1,26
75	58,7	BUTYL BENZOATE	0,03		
76	59,0	BENZYLIC ALCOHOL	0,03		0,03
77	59,2	2-PHENYLMETHYL BUTYRATE	0,02		
78	59,9	Epi-CUBEBOL	0,05		
79	60,7	AROMATIC COMPONENT	0,02		
80	61,9	α-CALACORENE	0,04		
81	62,4	HUMULENE OXIDE	0,04		
82	62,9	BENZENIC COMPOUND + CUBEBOL	0,07		
83	63,6	HYDROXYAROMATIC COMPONENT	0,03		
84	63,9	CHAVICYL ACETATE	0,03		
85	64,3	β-CALACORENE	0,02		
86	64,8	SESQUITERPENOL	0,05		
87	65,3	ISOCARYOPHYLLENE OXIDE	0,10		
88	65,8	CARYOPHYLLENE OX. + ISOPRENYL BENZ.	0,19		
89	66,1	SESQUITERPENOL	0,03		
90	66,6	METHYLISOEUGENOL	0,02		

Identification results 3 – YLANG YLANG COMPLETE BATCH N° Y10102

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)
91	67,6	E-NEROLIDOL	0,13		
92	68,7	EPOXY-6,7-HUMULENE	0,02		
93	68,8	GERMACRA-1,5-DIEN-4-OL	0,02		
94	69,2	GLEENOL	0,02		
95	69,5	EPI-CUBENOL	0,26		
96	69,7	PRENYL BENZOATE	0,53		
97	69,8	CUBENOL + LEVOJUNENOL	0,24		
98	70,1	p-CRESOL	0,06		
99	70,2	ELEMOL	0,15		
100	70,4	GLOBULOL	0,02		
101	70,7	GUAJOL	0,11		
102	71,0	METHYL p-ANISATE	0,03		
103	71,2	10-épi-γ-EUDESOL	0,04		
104	71,3	PHENYLETHYLIC ESTER	0,06		
105	72,3	SESQUITERPENOL	0,04		
106	72,9	PHENYLIC ESTER + SPATHULENOL	0,06		
107	73,0	Cis-3-HEXENYLE BENZOATE	0,02		
108	73,8	SESQUITERPENOL	0,12		
109	74,1	CINNAMYL ACETATE	0,40		
110	74,8	EUGENOL	0,50		0,50
111	75,0	T-CADINOL	0,58		
112	75,3	METHYLISOEUGENOL	0,02		
113	75,5	SESQUITERPENOL	0,03		
114	75,8	α-MUUROLOL	0,97		
115	76,3	CUBENOL ISOMER	0,34		
116	76,6	CADINOL ISOMER	0,24		
117	76,9	SESQUITERPENOL	0,02		
118	77,2	CADINOL ISOMER	0,07		
119	77,6	α-EUDESOL	0,03		
120	78,0	α-CADINOL	1,89		
121	78,9	FARNESYL ACETATE	1,96		
122	79,0	EUGENYL ACETATE	0,03		
123	79,2	FARNESAL	0,02		
124	80,5	7-HYDROXYFARNESENE	0,03		
125	81,7	HYDROXYSESQUITERPENIC COMPONENT	0,16		
126	82,6	SESQUITERPENOL	0,07		
127	83,0	SESQUITERPENOL	0,03		
128	83,2	FARNESOL	2,29		2,29
129	83,6	ISOEUGENOL	0,13		0,13
130	84,6	ISOEUGENYL ACETATE	0,02		
131	86,9	SESQUITERPENOL	0,06		
132	94,5	GERANYL BENZOATE	0,14		
133	96,2	p-CRESYL BENZOATE	0,04		
134	96,8	BENZYL BENZOATE	7,45		7,55
135	104,9	BENZYL SALICYLATE	1,80		1,80
136	109,7	PALMITIC ACID	0,07		
		TOTAL	99,87		21,08