



PLANT THERAPY

100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: CE0101

ESSENTIAL OIL: CITRONELLA
BOTANICAL NAME: CYMBOPOBON WINTERIANUS
ORIGIN: INDONESIA

KEY CONSTITUENTS IN THIS BATCH OF CITRONELLA OIL	%
CITRONELLAL	35.6
GERANIOL	21.8
CITRONELLOL	12.7
LIMONENE	3.8
ELEMOL	3.0
GERANYL ACETATE	2.8
β -ELEMENE	2.6
CITRONELLYL ACETATE	2.4
δ -CADINENE	2.2
GERMACRENE D	2.1
ISOPULEGOL	1.5
LINALOOL	1.0

Comments from Robert Tisserand: This oil has a nice fresh, clean odor profile, and good concentrations of geraniol and citronellol, two very active constituents.

CUSTOMER :

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

Sample nature: ESSENTIAL OIL
Botanical species: CYMBOPOGON WINTERIANUS
Reference name: CITRONELLA
Batch number: CE0101
Origin: INDONESIA
Part: HERB
Pyre^ossences reference: D599
Date of reception: 04/30/2015
Date analysis: 05/11/2015
Packaging: Amber flask of 5 ml – ambient temperature
Analysis: Classic

Validated report by :

Daniel DANTIN



GAS CHROMATOGRAPHY norm NF ISO 11024

Analysis conditions :

CPG 6890 / MS 5973 – Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

CPG 6890 FID - Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

Temperature program : 6 mn to 60 °C -2 °C/mn→250 °C - 20mn to 250 °C

Carrier gas He : 23 psis/MS – 30 psis/FID

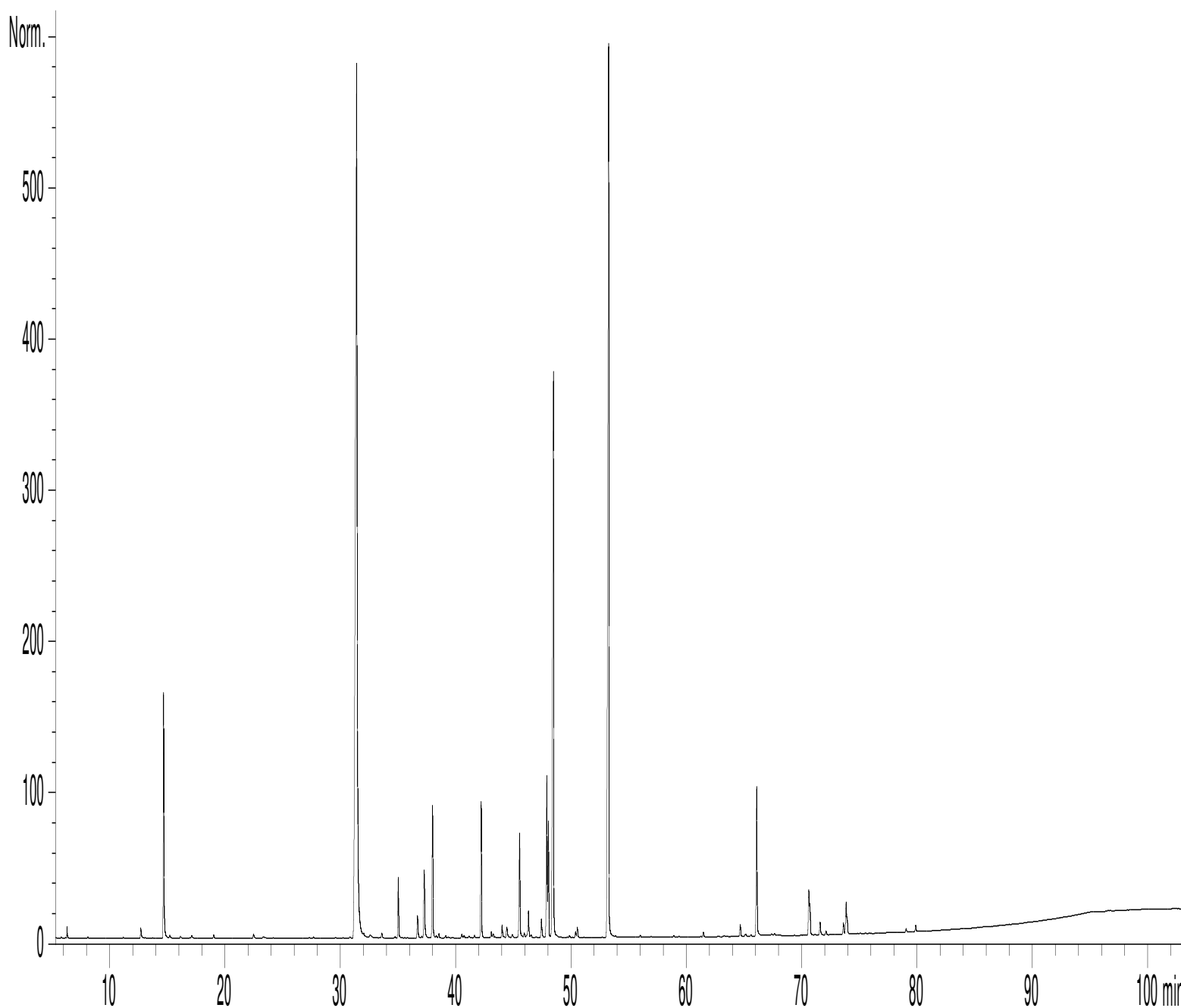
Sample injection / split : 1 µl of 10 % solution in hexane,

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

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

Chromatographic profile (GC/FID)

FID1 A, (Z:\PLANTHER\CI15D599.D)



Identification results 1 : CITRONELLA BATCH CE0101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	5,2	ACETONE	0,01		
2	5,8	CYCLOPENTANE, 1-METHYL-1-METHYLETHYL	0,02		
3	6,3	ETHANOL	0,12		
4	8,1	α -PINENE	0,02		
5	9,4	CAMPHERE	0,01		
6	11,2	SABINENE	0,02		
7	12,7	β -MYRCENE	0,20		
8	13,1	α -PHELLANDRENE	0,01		
9	14,7	LIMONENE	3,83		3,83
10	15,2	β -PHELLANDRENE	0,05		
11	16,1	Cis- β -OCIMENE	0,04		
12	17,0	γ -TERPINENE	0,01		
13	17,1	Trans- β -OCIMENE	0,06		
14	19,0	TERPINOLENE	0,06		
15	22,5	6-METHYL-5-HEPTEN-2-ONE	0,09		
16	23,4	MELONAL Mw=140	0,06		
17	27,3	Cis-p-MENTHANE-3,8-DIOL	0,02		
18	27,7	Trans-p-MENTHANE-3,8-DIOL	0,03		
19	29,6	α -CUBEBENE	0,02		
20	30,8	MENTHONE	0,03		
21	31,4	CITRONELLAL	35,61		
22	32,1	ISOGERANIAL	0,03		
23	32,5	α -COPAENE	0,10		
24	33,6	β -BOURBONENE	0,10		
25	34,7	β 1-CUBEBENE	0,03		
26	35,0	LINALOOL	1,04		1,04
27	35,8	1-OCTANOL	0,01		
28	36,7	NEOISOPULEGOL	0,47		
29	37,1	CALARENE	0,03		
30	37,3	ISOPULEGOL	1,46		
31	38,0	β-ELEMENE	2,56		
32	38,3	β -CUBEBENE	0,05		
33	38,5	β -CARYOPHYLLENE	0,09		
34	39,1	TERPINENE-4-OL	0,05		
35	39,3	ISOISOPULEGOL	0,02		
36	40,5	ISOPULEGOL ISOMER	0,08		
37	40,7	CADINA-3,5-DIENE	0,06		
38	41,2	CADINADIENE ISOMER	0,04		
39	41,6	2,5-DIMETHYL-5-HEPTEN-1-OL	0,05		
40	42,2	CITRONELLYL ACETATE	2,36		
41	42,3	ZONARENE	0,05		
42	43,1	α -HUMULENE	0,12		
43	43,2	Cis-4,5-MUUROLADIENE	0,10		
44	44,0	NERAL	0,26		0,26
45	44,4	γ -MUUROLENE	0,18		
46	44,5	α -TERPINEOL	0,07		
47	44,9	GERANYL FORMIATE	0,07		

Identification results 2 : CITRONELLA BATCH CE0101

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
48	45,5	GERMACRENE D	2,14		
49	45,8	MUUIROLADIENE ISOMERE	0,07		
50	45,9	NERYL ACETATE	0,04		
51	46,2	β-SELINENE	0,04		
52	46,3	α-MUUIROLENE	0,51		
53	46,5	α-SELINENE	0,05		
54	47,0	BICYCLOGERMACRENE	0,02		
55	47,4	GERANIAL	0,40		0,40
56	47,9	GERANYL ACETATE	2,84		
57	48,0	δ-CADINENE	2,20		
58	48,5	CITRONELLOL	12,70		12,70
59	48,6	γ-CADINENE	0,10		
60	49,7	γ-GERANIOL	0,01		
61	49,9	CADINA-1,4-DIENE	0,04		
62	50,4	α-AMORPHENE	0,12		
63	50,5	NEROL	0,19		
64	50,6	CITRONELLYL PROPIONATE	0,02		
65	53,2	GERANIOL	21,82		21,82
66	53,9	E-GERANYL ACETONE	0,04		
67	55,6	Épi-CUBEBOL	0,04		
68	56,9	ALIPHATIC ACETATE	0,02		
69	58,9	CUBEBOL	0,04		
70	59,4	CYCLOCARBOXYLATE ESTER	0,02		
71	61,5	ALIPHATIC ALCOCHOL	0,10		
72	63,3	SESQUITERPENOL Mw=222	0,02		
73	64,7	GERMACRA-1,5-DIEN-4-OL	0,24		
74	65,1	Epi-CUBENOL	0,06		
75	65,6	CUBENOL	0,03		
76	66,1	ELEMOL	3,04		
77	67,4	Cis-p-MENTHANE-3,8-DIOL	0,02		
78	67,7	10-epi-γ-EUDESOL	0,03		
79	70,6	EUGENOL	0,93		0,93
80	70,7	T-CADINOL + γ-EUDESOL	0,57		
81	71,2	SESQUITERPENOL	0,01		
82	71,6	α-MUUIROL	0,27		
83	72,1	CADINOL ISOMER	0,07		
84	73,6	α-EUDESOL	0,21		
85	73,8	α-CADINOL	0,68		
86	73,9	β-EUDESOL	0,21		
87	75,1	EUDESMA-7-EN-4-OL	0,01		
88	75,6	DODECADIENOL TRIMETHYL	0,01		
89	75,9	GERANYL ESTER	0,01		
90	79,1	FARNESOL	0,06		0,06
91	79,9	GERANYLGERANIOL	0,12		
92	88,0	METHOXYEUGENOL	0,01		
		TOTAL	99,98		41,04