



PLANT THERAPY

100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: N30101

ESSENTIAL OIL: NIAOULI ORGANIC
BOTANICAL NAME: MELALEUCA QUINQUINERVA
ORIGIN: MADAGASCAR

KEY CONSTITUENTS PRESENT IN THIS BATCH OF ORGANIC NIAOULI OIL	%
1,8-CINEOLE	49.3
α -PINENE + α -THUYENE	12.3
LIMONENE	9.8
α -TERPINEOL + TERPINYL ACETATE	6.6
VIRIDIFLOROL	6.3
β -PINENE	3.4
β -CARYOPHYLLENE + TERPINEN-4-OL	1.8

Comments from Robert Tisserand: An excellent quality niaouli oil in terms of both odor profile and constituent profile.

Customer :

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

Sample nature : ESSENTIAL OIL
Botanical name : MELALEUCA QUINQUINERVIA
Reference name : NIAOULI ORGANIC
Batch number : N30101
Origin : MADAGASCAR
Part: LEAF
Pyrenessences reference : F061
Date of reception : 10/02/2015
Date of analysis : 10/14/2015
Packaging : Amber flask of 5 ml - ambient temperature
Wanted analysis : Classic

Report validated by :

Daniel Dantin



GAS CHROMATOGRAPHY (norm NF ISO 11024)

Conditions :

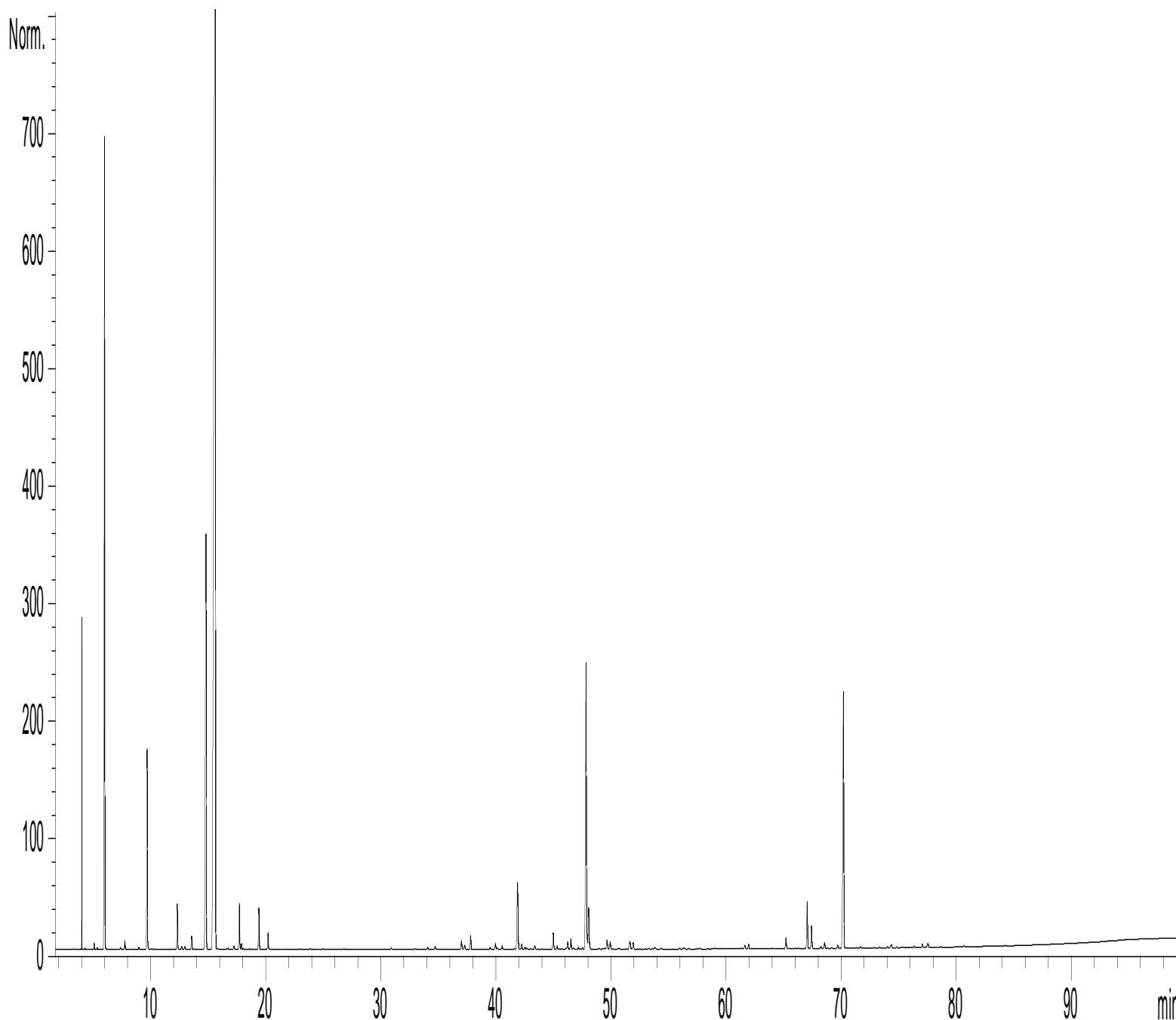
- GC: 6890 - SM : 5973 AGILENT : Column VF WAX polar : 60 m × 0,25 mm × 0,5 µm
- GC/FID 6890 AGILENT : Column VF WAX polar : 60 m × 0,25 mm × 0,5 µm
- Programmation : 6 min to 60°C – 2°C/min → 250°C – 10 min to 250°C
- Carrier gas : He 30 psi/FID ; 23 psi/MS
- Mass : 30 à 350
- Dilution: 10 % in Hexane
- 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) :

FID2 B, (Z:\PLANTHER\MQ53F061.D)



Identification results 1 – NIAOULI ORGANIC MADAGASCAR BATCH N° N3010153

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)
1	5,3	METHYL 2-METHYLBUTYRATE	0,02		
2	6,0	α-PINENE + α-THUYENE	12,28		
3	7,4	α-FENCHENE	0,03		
4	7,7	CAMPHENE	0,13		
5	9,7	β-PINENE	3,40		
6	10,0	ISOAMYL ACETATE	0,02		
7	10,2	SABINENE	0,01		
8	12,3	β-MYRCENE	0,77		
9	12,7	α-PHELLANDRENE	0,05		
10	12,9	ψ-LIMONENE	0,05		
11	13,5	α-TERPINENE	0,24		
12	14,2	1,8-CINEOL, 2,3-DEHYDRO-	0,01		
13	14,8	LIMONENE	9,78		9,78
14	15,6	1-8- CINEOLE	49,34		
15	16,6	FURAN, 2-PENTYL-	0,01		
16	16,7	Cis-β-OCIMENE	0,02		
17	17,2	MENTHATRIENE ISOMER	0,06		
18	17,7	γ-TERPINENE	0,82		
19	17,9	Trans-β-OCIMENE	0,10		
20	18,0	STYRENE	0,02		
21	19,4	p-CYMENE	0,77		
22	20,2	TERPINOLENE	0,30		
23	23,0	PINOL	0,01		
24	23,9	6-METHYL-5-HEPTEN-2-ONE	0,01		
25	25,0	ROSE cis-OXIDE	0,01		
26	26,8	3-HEXEN-1-OL	0,01		
27	30,9	α,p-DIMETHYLSTYRENE	0,02		
28	31,1	LINALOOL cis-OXIDE	0,01		
29	33,0	LINALOOL trans-OXIDE	0,01		
30	33,0	SESQUITERPENE	0,01		
31	34,1	SESQUITERPENE	0,05		
32	34,7	α-COPAENE	0,06		
33	37,0	BENZALDEHYDE	0,19		
34	37,3	α-GURJUNENE	0,09		
35	37,8	LINALOOL	0,26		0,26
36	39,5	NEOISOPULEGOL	0,04		
37	39,9	ISOPULEGOL	0,12		
38	40,1	PINOCARVONE	0,02		
39	40,5	FENCHOL	0,07		
40	41,6	β-CUBEBENE	0,01		
41	41,9	β-CARYOPHYLLENE + TERPINENE-4-OL	1,80		
42	42,2	6,9-GUAIADIENE	0,12		
43	42,5	AROMADENDRENE	0,04		
44	42,7	SESQUITERPENE	0,03		
45	43,0	SESQUITERPENE	0,01		

Identification results 2 – NIAOULI ORGANIC MADAGASCAR BATCH N° N3010153

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)
46	43,4	METHYL BENZOATE	0,06		
47	45,0	ALLO-AROMADENDRENE	0,36		
48	45,3	ETHYL BENZOATE	0,07		
49	45,5	GURJUNENE ISOMER	0,01		
50	45,7	Trans-p-MENTHA-1(7)-,8-DIEN-2-OL	0,01		
51	46,2	δ-TERPINEOL	0,18		
52	46,5	α-HUMULENE	0,23		
53	46,7	γ-SELINENE	0,04		
54	47,2	NERAL	0,05		0,05
55	47,4	SESQUITERPENE	0,01		
56	47,5	γ-MUUROLENE	0,04		
57	47,8	α-TERPINEOL + TERPENYL ACETATE	6,58		
58	48,0	BORNEOL	0,50		
59	48,1	LEDENE	0,48		
60	48,9	SESQUITERPENE	0,02		
61	49,6	β-SELINENE	0,22		
62	49,9	α-SELINENE + α-MUUROLENE	0,17		
63	50,6	CARVONE	0,01		
64	50,7	α-FARNESENE	0,02		
65	51,4	CITRONELLOL	0,10		0,10
66	51,6	δ-CADINENE	0,14		
67	51,9	γ-CADINENE	0,15		
68	53,3	MYRTENOL	0,01		
69	53,6	Trans-p-MENTHA-1(7),8(9)-DIEN-2-OL	0,01		
70	53,8	NEROL	0,04		
71	53,8	α-AMORPHENE	0,01		
72	54,3	SESQUITERPENE Mw=202	0,02		
73	55,9	Trans-CARVEOL	0,02		
74	56,3	CALAMENENE	0,02		
75	56,4	GERANIOL	0,02		0,02
76	56,7	p-CYMENE-8-OL	0,02		
77	59,0	Cis-p-MENTHA-1(7),8(9)-DIEN-2-OL	0,02		
78	61,1	α-CALACORENE	0,01		
79	61,3	2-HYDROXYCINEOLE	0,02		
80	61,6	METHYL THIO BENZOATE	0,08		
81	61,9	PALUSTROL	0,11		
82	65,2	CARYOPHYLLENE EPOXIDE	0,25		
83	66,3	Epi-GLOBULOL	0,02		
84	67,0	NEROLIDOL	0,95		
85	67,4	LEDOL	0,50		
86	68,2	EPOXY-6,7-HUMULENE	0,05		
87	68,6	GLEENOL	0,13		
88	68,8	Epi-CUBENOL	0,01		
89	69,2	CUBENOL	0,02		
90	69,7	GLOBULOL	0,06		

Identification results 3 – NIAOULI ORGANIC MADAGASCAR BATCH N° N3010153

Peak	RT (min)	Compound	%	Norm (%)	Allergens (%)
91	70,2	VIRIDIFLOROL	6,26		
92	71,3	10-epi- γ -EUDESMOL	0,02		
93	71,7	ROSIFOLIOL	0,04		
94	74,0	EUGENOL	0,04		0,04
95	74,3	T-CADINOL	0,10		
96	74,8	SESQUITERPENOL	0,02		
97	76,3	BULNESOL	0,03		
98	77,1	α -EUDESMOL	0,08		
99	77,5	α -CADINOL	0,02		
100	77,5	β -EUDESMOL	0,10		
101	78,6	EUDESMA-7(11)-EN-4-OL	0,02		
102	80,7	CARYOPHYLLA-3,7-DIEN-6-OL	0,03		
103	82,4	SESQUITERPENIC EPOXIDE	0,01		
		TOTAL	99,85		10,25