



PLANT THERAPY

100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: M40102

ESSENTIAL OIL: MYRRH

BOTANICAL NAME: COMMIPHORA MYRRHA

ORIGIN: SOMALIA

KEY CONSTITUENTS PRESENT IN THIS BATCH OF MYRRH OIL	%
FURANOEUDESMA-1,3-DIENE	33.8
FURANODIENE	28.4
LINDESTRENE	7.6
β -ELEMENE	4.9
2-METHOXYFURANO-1(10),4-DIENE	4.5
GERMACRENE B	2.8
GERMACRENE A	1.4
GERMACRENE D	1.3
T-CADINOL	1.1
δ -ELEMENE	1.1
Cis- β -ELEMENONE	1.0

Comments from Robert Tisserand: An excellent myrrh oil, which shows in both the odor profile and the analysis. We have changed Curzerene to Furanodiene, as this is a mistake on analysis - these two compounds are often confused.

CUSTOMER :

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

Sample nature: ESSENTIAL OIL
Botanical species: COMMIPHORA MYRRHA
Reference name: MYRRH
Batch number: M40102
Origin: SOMALIA
Part: RESIN/GUM
Pyre^essences reference: E005
Date of reception: 06/15/2015
Date analysis: 06/29/2015
Packaging: Amber flask of 5 ml – ambient temperature
Analysis: GC Classic

Validated report by :

Daniel DANTIN



GAS CHROMATOGRAPHY norm NF ISO 11024

Analysis conditions :

CPG 7890 / MS 5975 AGILENT – Column : VF WAX polar 60 m × 0,25 mm × 0,5 µm

CPG 5890 FID AGILENT - Column : INNOWAX polar 60 m × 0,25 mm × 0,5 µm

Temperature program : 6 min à 60°C – 2°C/min → 250°C – 10 min 250 °C

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

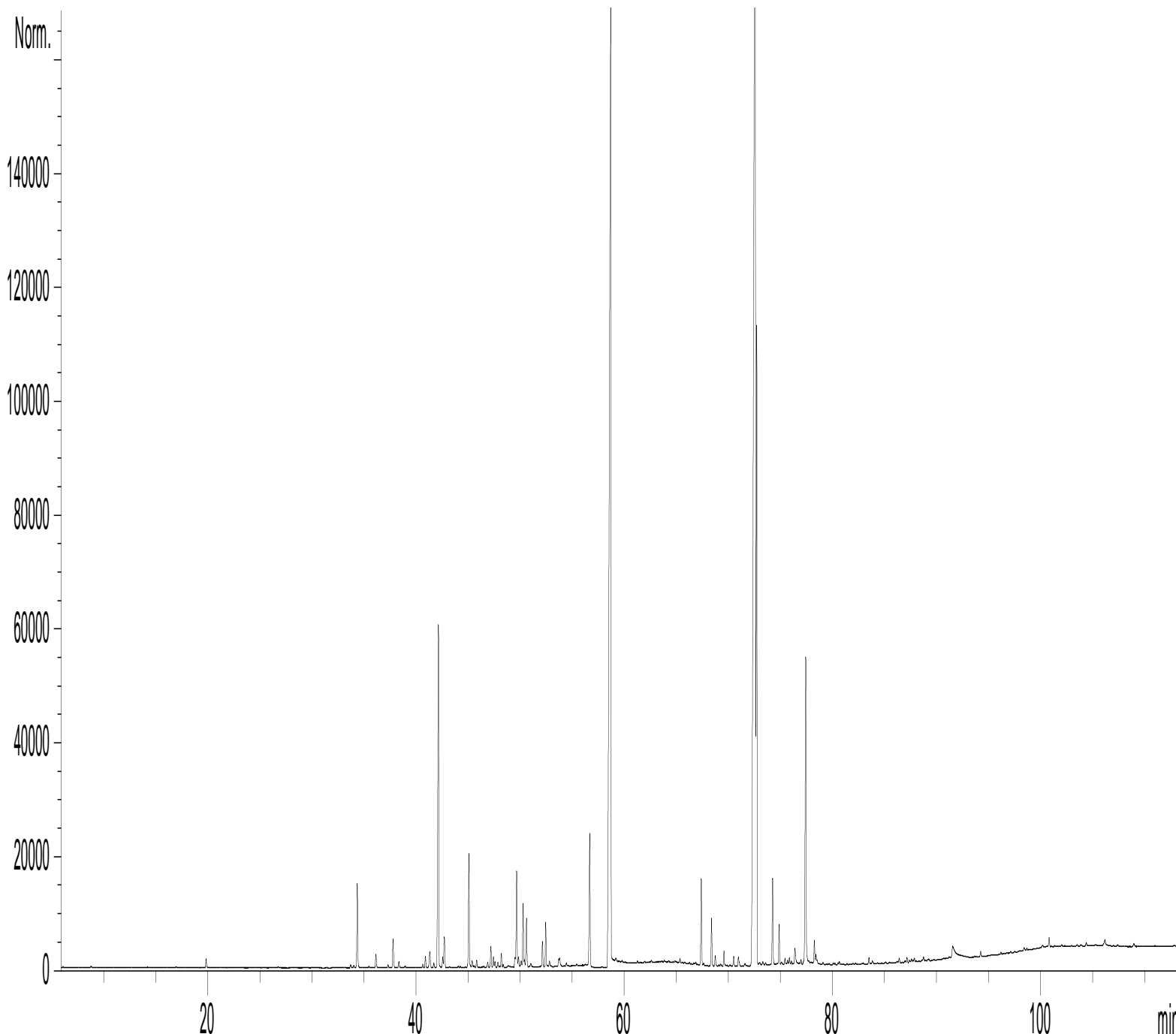
Sample injection / split : 1 µl of 10% solution in hexane,

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, (Y:\PLANTHER\CM15E005.D)



Identification results 1 : MYRRH SOMALIA BATCH M40102

Peak	RT (min)	Compound name	%	Allergens (%)
1	5,4	ACETONE	0,01	
2	6,0	ETHANOL	0,01	
3	8,7	α -PINENE	0,03	
4	13,7	o-XYLENE	0,01	
5	14,6	β -MYRCENE	0,01	
6	17,0	LIMONENE	0,02	0,02
7	19,7	Trans- β -OCIMENE	0,13	
8	21,1	p-CYMENE	0,01	
9	26,6	PENTANOL DIMETHYL	0,02	
10	29,2	3-HEXEN-1-OL	0,01	
11	33,7	α -CUBEBENE	0,05	
12	34,0	ELEMENE ISOMER	0,04	
13	34,4	δ -ELEMENE	1,06	
14	35,5	YLANGENE + CYCLOSATIVENE	0,02	
15	36,1	α -COPAENE	0,19	
16	37,3	α -BOURBONENE	0,05	
17	37,8	β -BOURBONENE	0,38	
18	38,4	α -GURJUNENE	0,09	
19	39,0	β 1-CUBEBENE	0,03	
20	40,6	α -cis-BERGAMOTENE	0,04	
21	40,9	α -SANTALENE	0,15	
22	41,3	ϵ -CADINENE + ELEMENE ISOMER	0,28	
23	41,7	α -trans-BERGAMOTENE	0,06	
24	42,1	β-ELEMENE	4,89	
25	42,5	β -CUBEBENE	0,13	
26	42,6	β -CARYOPHYLLENE	0,47	
27	43,1	SESQUITERPENE	0,02	
28	44,1	SESQUITERPENE	0,02	
29	44,,2	AROMADENDRENE	0,02	
30	45,1	GERMACRENE A	1,41	
31	45,4	SESQUITERPENE	0,12	
32	45,8	ALLO-AROMADENDRENE	0,11	
33	46,5	ZONARENE	0,03	
34	46,9	SESQUITERPENE	0,07	
35	47,2	α -HUMULENE	0,27	
36	47,4	γ -SELINENE	0,13	
37	47,6	CADINENE ISOMER	0,07	
38	47,9	4,5-di-epi-ARISTOLOCHENE	0,07	
39	48,1	SESQUITERPENE	0,02	
40	48,2	γ -MUUROLENE	0,17	
41	48,3	β -MAALIENE	0,04	
42	48,5	SESQUITERPENE Mw=202	0,01	
43	48,9	SESQUITERPENE	0,06	
44	49,7	GERMACRENE D	1,34	
45	49,8	δ 1-CADINENE	0,15	

Identification results 2 : MYRRH SOMALIA BATCH M40102

Peak	RT (min)	Compound name	%	Allergens (%)
46	49,8	SESQUITERPENE	0,15	
47	50,3	β-SELINENE	0,94	
48	50,6	α-SELINENE + α-MUUROLENE	0,65	
49	50,9	SESQUITERPENE	0,01	
50	51,0	BICYCLOGERMACRENE	0,08	
51	52,1	δ-CADINENE	0,36	
52	52,5	γ-CADINENE	0,57	
53	52,8	δ-SELINENE	0,08	
54	53,7	SELINA-3,7-DIENE	0,08	
55	53,8	CADINA-1,4-DIENE	0,12	
56	54,4	SESQUITERPENE Mw=204	0,05	
57	55,4	SESQUITERPENE Mw=202	0,02	
58	56,3	SESQUITERPENE Mw=204	0,02	
59	56,7	GERMACRENE B	2,78	
60	58,7	CURZERENE Mw = 216	28,44	
61	59,2	SESQUITERPENIC COMPONENT	0,05	
62	61,3	α-CALACORENE	0,03	
63	62,0	Epi-CUBEBOL	0,02	
64	63,9	SESQUITERPENIC COMPONENT	0,03	
65	64,9	CUBEBOL	0,02	
66	65,4	CARYOPHYLLENE EPOXIDE	0,04	
67	66,7	SESQUITERPENIC COMPONENT	0,03	
68	66,9	SESQUITERPENOL	0,03	
69	67,4	Cis-β-ELEMENONE	1,04	
70	67,6	SESQUITERPENOL	0,03	
71	68,4	FURANOEDESMA-1,4-DIENE ISOMER	0,60	
72	68,8	Épi-CUBENOL	0,14	
73	69,3	CUBENOL	0,03	
74	69,6	ELEMOL	0,18	
75	70,5	ELEMENONE ISOMER	0,13	
76	71,0	FURANODIENE ISOMER Mw=216	0,16	
77	72,6	FURANOEDESMA-1,3-DIENE	33,82	
78	72,7	LINDESTRENE Mw = 214	7,62	
79	73,0	COMPONENT Mw=214	0,07	
80	73,3	COMPONENT Mw=216	0,07	
81	73,6	COMPONENT Mw=214	0,04	
82	74,3	T-CADINOL	1,10	
83	74,9	AROMATIC COMPONENT Mw=246	0,47	
84	75,1	SESQUITERPENOL	0,03	
85	75,5	ACETYL-8,12-EPOXYGERMACRA-1,4-7-11-TET. ISOMER	0,07	
86	75,9	CADINOL ISOMER	0,07	
87	76,4	CURZERENONE Mw=230	0,28	
88	77,0	α-EUDES MOL	0,06	
89	77,1	β-EUDES MOL	0,04	
90	77,4	2-METHOXYFURANO-1(10),4-DIENE	4,51	

Identification results 3 : MYRRH SOMALIA BATCH M40102

Peak	RT (min)	Compound name	%	Allergens (%)
91	78,3	β-NOOTKATOL	0,31	
92	78,4	EUDESMA-7,11-EN-4-OL	0,15	
93	78,5	CURZERENONE ISOMER Mw=230	0,07	
94	79,1	COMPONENT Mw=246	0,04	
95	79,4	SESQUITERPENOL Mw=220	0,06	
96	80,1	SESQUITERPENOL Mw=220	0,03	
97	80,3	SESQUITERPENOL Mw=222	0,03	
98	80,5	SESQUITERPENOL Mw=220	0,03	
99	80,7	SESQUITERPENOL Mw=220	0,04	
100	83,5	SESQUITERPENOL Mw=220	0,08	
101	83,8	SESQUITERPENOL Mw=220	0,04	
102	85,5	DIHYDROFURANODIENONE ISOMER Mw=232	0,02	
103	86,4	COMPONENT Mw=246	0,05	
104	86,9	SESQUITERPENOL Mw=220	0,03	
105	87,2	2-METHOXYFURANODIENONE ISOMER	0,07	
106	87,9	2-METHOXYFURANOQUAIA-9-EN-8-ONE	0,06	
107	88,8	COMPONENT Mw=274	0,07	
108	89,3	SESQUITERPENOL Mw=220	0,03	
109	91,2	METHOXYFURANOQUAIAIANENONE ISOMER	0,03	
110	91,5	2-ACETOXY FURANODIENE Mw=274	0,68	
111	94,2	ACETOXY FURANODIENE ISOMER	0,07	
112	96,2	DIHYDROFURANODIENONE ISOMER Mw=232	0,01	
113	97,1	FURANODIENONE ISOMER	0,01	
114	98,4	2-METHOXY DIHYDRO FURANODIENONE ISOMER	0,06	
115	100,8	METHYL ABIETATRIENATE ISOMER Mw=272	0,15	
116	104,3	POLYOXYGENED COMPONENT Mw=232	0,04	
117	106,2	POLYOXYGENED COMPONENT Mw=232	0,16	
118	109,0	AROMATIC COMPONENT	0,06	
		TOTAL	99,67	0,02