

Certificate of Analysis

Analysed essential oil : Marjoram (sweet)

Analysis date : December, 23th 2015

Batch : 355FA503

Shelf life : January 2019

❖ General description

Essential oil	Marjoram (sweet)	Origin	Egypt
Latin name	<i>Origanum majorana</i> L.		

❖ Organoleptic characteristics

Appearance	Clear and mobile liquid
Colour	Very pale yellow, almost colourless
Odour	Characteristic

❖ Physico-chemical characteristics

	Results (at 20°C)	Technical specifications				
Specific gravity	0.891	0.885	<	d	<	0.900
Refractive index	1.4722	1.4700	<	IR	<	1.4800
Optical rotation	+20.80°	+12°	<	$[\alpha]^{20}_d$	<	+24°

❖ Volatile elucidation

GC : Perkin Elmer – Clarus 500

Column : Elite - 1, 30 m, Ø 0.25 mm, 0.25 µm df

Injection : split

Detector : FID

Carrier gas : H₂

⇒ See Chromatogram : non-polar column

Date : 2015-12-23

Software Version : 6.2.0.0.0:B27
Sample Name : Marjolaine a coquille a
Instrument Name : CLARUS 500
Rack/Vial : 0/11
Sample Amount : 1.000000
Cycle : 11

Date : 23/12/2015 14:06:12
Data Acquisition Time : 22/12/2015 09:15:50
Channel : A
Operator : Davenne
Dilution Factor : 1.000000

Result File :
Sequence File : C:\Sequences\CPG\2015\151221b.seq

Rapport d'analyse

colonne apolaire

Pic #	Component Name	TR [min]	Area [%]
1	thujene <alpha>	9.59	0.73
2	pinene <alpha>	9.85	0.85
3	camphene	10.32	0.05
4	sabinene	11.28	8.59
5	pinene <beta>	11.43	0.58
6	myrcene	12.04	2.23
7	phellandrene <alpha>	12.55	0.53
8	terpinene <alpha>	13.11	8.89
9	cymene <p>	13.23	1.39
10	limonene+cineole<1.8>+phelland	13.59	4.25
11	ocimene <(E)-beta>	14.45	0.05
12	terpinene <gamma>	14.92	14.33
13	sabinene hydrate <cis>	15.05	3.44
14	terpinolene	16.22	3.26
15	sabinene hydrate <trans>	16.38	11.11
16	linalool	16.52	1.14
17	menth-2-en-1-ol <cis-p>	17.42	1.51
18	menth-2-en-1-ol <trans-p>	18.16	0.87
19		19.30	0.06
20	terpinen-4-ol	19.95	23.78
21	terpineol <alpha>	20.40	3.44
22		20.58	0.24
23	piperitol <cis>	20.73	0.33
24	piperitol <trans>	21.21	0.40
25		21.67	0.08
26		22.31	0.19
27		23.34	0.68
28	linalool acetate	23.54	1.60
29		24.67	0.04
30		25.30	0.26
31		25.74	0.04
32		27.39	0.09
33	geranyl acetate	28.75	0.05
34	caryophyllene <(E)>	30.75	2.70
35		31.52	0.07
36	humulene <alpha>	32.06	0.13
37	bicyclogermacrene	33.72	1.82
38		34.33	0.04
39		36.45	0.07
40	caryophyllene oxide	36.63	0.06
41		38.78	0.03
			100.00

Chromatogram

Sample Name : Marjolaine à coquille a Sample #: 355fa503 Page 1 of 1
FileName : C:\Data\Colonne Apolaire\Huiles Essentielles\Marjolaine\A Coquilles\2015\marjolaine à coquilles 151221a.raw
Date : 23/12/2015 14:06:13
Method : marjolaine à coquilles.mth Time of Injection: 22/12/2015 09:15:50
Start Time : 0.00 min End Time : 82.00 min Low Point : -47.25 mV High Point : 993.88 mV
Plot Offset: -47.25 mV Plot Scale: 1041.1 mV

