

Certificate of Analysis

Analysed essential oil : Marjoram (sweet)

Analysis date : May, 22nd 2014

Batch : 141FA402

Shelf life : June 2017

❖ 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	0.889	0.880	<	d	<	0.900
Refractive index	1.4706	1.4700	<	RI	<	1.4800
Optical rotation	+22.25°	+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 : 2014-11-27

Software Version : 6.2.0.0.0:B27
Sample Name : Marjolaine à Coquilles
Instrument Name : CLARUS 500
Rack/Vial : 0/4
Sample Amount : 1.000000
Cycle : 4

Date : 22/05/2014 15:19:13
Data Acquisition Time : 21/05/2014 22:51:58
Channel : A
Operator : Davenne
Dilution Factor : 1.000000

Result File :
Sequence File : C:\Sequences\CPG\2014\140521.seq

Rapport d'analyse

colonne apolaire

Pic #	Component Name	TR [min]	Area [%]
1		5.01	0.02
2	thujene <alpha>	9.88	0.51
3	pinene <alpha>	10.15	0.72
4	camphene	10.63	0.03
5	sabinene	11.59	7.31
6	pinene <beta>	11.74	0.53
7	myrcene	12.35	2.05
8	phellandrene <alpha>	12.87	0.36
9	terpinene <alpha>	13.43	7.95
10	cymene <p>	13.56	1.05
11	limonene+cineole<1.8>+phelland	13.93	4.06
12	ocimene <(Z)-beta>	14.31	0.05
13	ocimene <(E)-beta>	14.79	0.06
14	terpinene <gamma>	15.25	13.00
15	sabinene hydrate <cis>	15.40	3.43
16	terpinolene	16.56	2.93
17	sabinene hydrate <trans> + lin	16.77	20.66
18	menth-2-en-1-ol <cis-p>	17.77	1.52
19	menth-2-en-1-ol <trans-p>	18.52	0.87
20		18.77	0.05
21		19.18	0.03
22	borneol	19.68	0.06
23	terpinen-4-ol	20.32	22.67
24	terpineol <alpha>	20.76	2.97
25	piperitol <cis>	21.09	0.34
26		21.39	0.04
27	piperitol <trans>	21.56	0.39
28		22.54	0.04
29		23.67	0.07
30	linalool acetate	23.88	2.16
31		25.67	0.02
32		27.74	0.03
33		28.35	0.06
34	geranyl acetate	29.07	0.07
35	caryophyllene <(E)>	31.11	2.22
36	humulene <alpha>	32.42	0.10
37		33.29	0.02
38	bicyclogermacrene	34.08	1.38
39		34.49	0.07
40		36.80	0.04
41	caryophyllene oxide	37.00	0.06
			100.00

Chromatogram

Sample Name : Marjolaine à Coquilles Sample #: 141FA402 Page 1 of 1
FileName : C:\Data\Colonne Apolaire\Huiles Essentielles\Marjolaine\A Coquilles\2014\marjolaine à coquilles 140521.raw
Date : 22/05/2014 15:19:19
Method : marjolaine à coquilles.mth Time of Injection: 21/05/2014 22:51:58
Start Time : 0.00 min End Time : 82.00 min Low Point : -47.22 mV High Point : 993.88 mV
Plot Offset: -47.22 mV Plot Scale: 1041.1 mV

