

## Certificate of Analysis

Modèle/Révision/Date de révision : BAHEFR001 / 0 / 05.11.18  
Modification(s) : aucune  
Editée le : 05/11/18

p1/1

### Analysed essential oil : **Marjoram (sweet)**

Analysis date : July, 18<sup>th</sup> 2017

Batch : 142BL907

Shelf life : 06/2022

### ❖ General description

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

### ❖ Organoleptic characteristics

Appearance	Clear mobile and liquid
Colour	Almost colourless
Odour	Characteristic

### ❖ Physico-chemical characteristics

	Results (at 20°C)	Technical specifications				
Specific gravity	0.893	0.885	<	d	<	0.900
Refractive index	1.4709	1.4700	<	IR	<	1.4800
Optical rotation	+21,40°	+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 : H<sub>2</sub>

⇒ See Chromatogram : non-polar column

Date : 5 Nov. 18

Software Version : 6.3.2.0646  
Sample Name : HE Marjolaine a Coquilles 171FA703  
Instrument Name : CLARUS 500  
Rack/Vial : 0/9  
Sample Amount : 1.000000  
Cycle : 9

Date : 7/18/2017 10:40:36 AM  
Data Acquisition Time : 7/18/2017 6:31:30 AM  
Channel : B  
Operator : Clemence  
Dilution Factor : 1.000000

Result File :  
Sequence File : C:\Sequences\CPG\2017\170717.seq

## Rapport d'analyse

colonne polaire Elite WAX

pic #	Nom composant	TR [min]	Aire [%]
1		2.91	0.03
2	pinene <alpha>	3.08	1.39
3		3.72	0.03
4	pinene <beta>	4.46	0.46
5	sabinene	4.78	8.28
6	phellandrene <alpha>+myrcene	5.85	2.55
7	terpinene <alpha>	6.17	8.40
8	limonene	6.64	2.14
9	cineole <1.8> + phellandrene <	6.86	1.97
10		7.03	0.02
11		7.84	0.04
12	terpinene <gamma>	8.07	13.66
13	ocimene<E-beta>	8.32	0.09
14	cymene <p>	8.72	1.16
15	terpinolene	9.17	3.12
16		12.69	0.02
17		15.36	0.04
18	sabinene hydrate <cis>	15.63	3.43
19		16.11	0.03
20		17.89	0.16
21	sabinene hydrate <trans>	18.65	16.54
22	linalool	18.94	1.00
23	menth-2-en-1-ol <cis-p>	19.10	1.45
24	linalool acetate	19.22	1.85
25	caryophyllene <(E)>	20.11	2.26
26		20.27	0.04
27	terpinen-4-ol	20.53	22.58
28		21.00	0.09
29	menth-2-en-1-ol <trans-p>	21.47	0.84
30		22.19	0.07
31	humulene <alpha>	22.57	0.11
32		22.75	0.05
33	piperitol <cis>	23.23	0.30
34		23.51	0.05
35	terpineol <alpha>	23.89	3.00
36	bicyclogermacrene	24.85	1.10
37		25.18	0.06
38	piperitol <trans>	25.60	0.40
39		25.90	0.06
40		26.09	0.04
41	geranyl acetate	26.26	0.08
42	citronellol	26.64	0.17
43		27.22	0.03
44	nerol	27.64	0.06
45		28.37	0.02
46		29.01	0.03
47	geraniol	29.29	0.16
48		31.61	0.03
49	caryophyllene oxide	32.62	0.06
50		36.01	0.08
51		36.53	0.13
52		37.37	0.05
53		38.40	0.04
54		38.93	0.08
55		40.44	0.08

100.00

7/18/2017 10:40:36 AM Result:

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Laboratoire Rosier Davenne

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# Chromatogram

Sample Name : HE Marjolaine à Coquilles 171FA703      Sample #: 171FA703      Page 1 of 1  
 FileName : C:\Data\Colonne Polaire\Huiles Essentielles\Marjolaine\A Coquilles\2017\marjolaine à coquilles 170717.raw  
 Date : 7/18/2017 10:40:37 AM  
 Method : marjolaine à coquilles.mth      Time of Injection: 7/18/2017 6:31:30 AM  
 Start Time : 0.00 min      End Time : 82.00 min      Low Point : -47.15 mV      High Point : 993.88 mV  
 Plot Offset: -47.15 mV      Plot Scale: 1041.0 mV

