

# Certificate of Analysis

Analysed essential oil : Carrot

Analysis date : November, 24<sup>th</sup> 2015

Batch : 289AC503

Shelf life : November 2018

## ❖ General description

Essential oil	Carrot	Origin	France
Latin name	<i>Daucus carota ssp maximus</i>		

## ❖ Organoleptic characteristics

Appearance	Clear and mobile liquid
Colour	Very pale yellow
Odour	Characteristic

## ❖ Physico-chemical characteristics

	Results (at 20°C)	Technical specifications				
Specific gravity	0.918	0.870	<	d	<	0.945
Refractive index	1.4883	1.4550	<	RI	<	1.5100
Optical rotation	-11.70°	-20°	<	$[\alpha]^{20}_d$	<	0°

## ❖ 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 : 2015-11-24

Software Version : 6.2.0.0.0:B27  
Sample Name : Carotte semence  
Instrument Name : CLARUS 500  
Rack/Vial : 0/4  
Sample Amount : 1.000000  
Cycle : 4

Date : 24/11/2015 16:46:33  
Data Acquisition Time : 23/11/2015 22:24:22  
Channel : A  
Operator : Davenne  
Dilution Factor : 1.000000

Result File :  
Sequence File : C:\Sequences\CPG\2015\151123b.seq

## Rapport d'analyse

colonne apolaire

Pic #	Component Name	TR [min]	Area [%]
1		8.01	0.03
2		9.39	0.04
3	thujene <alpha>	9.57	0.08
4	pinene <alpha>	9.84	10.54
5	camphene	10.31	0.36
6		10.46	0.17
7	sabinene	11.26	8.49
8	pinene <beta>	11.40	2.55
9		11.77	0.03
10	myrcene	12.01	0.82
11		13.06	0.08
12	cymene <p>	13.19	0.39
13	limonene + phellandrene <beta>	13.60	0.94
14		14.86	0.22
15		15.01	0.05
16		15.62	0.02
17		15.93	0.03
18		16.19	0.05
19		16.31	0.05
20	linalool	16.48	0.41
21		16.62	0.11
22		17.27	0.10
23		18.08	0.24
24		18.21	0.09
25		18.35	0.51
26		18.77	0.13
27		19.18	0.04
28		19.28	0.10
29		19.72	0.03
30		19.84	0.21
31		20.18	0.17
32		20.35	0.04
33		20.66	0.33
34		21.53	0.07
35		22.14	0.07
36	geraniol	22.26	0.11
37		23.27	0.85
38		24.65	0.27
39		26.24	0.03
40	terpinyl acetate <alpha>	27.40	0.12
41		27.85	0.02
42	geranyl acetate	28.71	0.67
43		28.87	0.07
44		29.07	0.07
45	daucene	29.24	1.31
46	elemene <beta>	29.41	0.18
47		29.63	0.17
48	bergamotene <alpha-cis>	30.26	0.09
49		30.47	0.02
50		30.62	0.54
51	caryophyllene <(E)>	30.75	7.10
52		30.87	0.25
53	santalene <alpha>	31.06	0.06
54		31.19	0.16
55	bergamotene <alpha-trans>	31.49	1.26
56		31.62	0.30
57		31.77	0.12
58		31.86	0.06

24/11/2015 16:46:33 Result:

Pic #	Component Name	TR [min]	Area [%]
59	humulene <alpha>	32.04	0.57
60	farnesene <(E)-beta> + ?	32.19	2.78
61		32.64	0.32
62	germacrene D	33.04	0.20
63	selinene <beta> + ?	33.29	2.95
64	selinene <alpha> + bicyclogerm	33.71	1.25
65		33.96	0.09
66		34.09	0.03
67	bisabolene <beta>	34.27	7.02
68	cadinene <delta>	34.73	0.24
69		34.94	0.04
70		35.22	0.08
71	bisabolene <(Z)-alpha>	35.50	1.09
72		35.91	0.47
73		36.11	0.08
74		36.51	0.43
75	caryophyllene oxide	36.64	4.39
76	carotol	37.40	33.25
77		37.62	0.67
78		37.93	0.12
79		38.44	0.27
80	daucol	38.61	0.91
81		39.33	0.05
82		39.58	0.41
83		39.80	0.12
84		40.35	0.02
85		40.62	0.21
86		41.02	0.07
87		41.60	0.03
88		42.28	0.09
89		42.69	0.05
90		43.00	0.05
91		44.46	0.03
92		46.11	0.13
93		46.35	0.03
94		54.52	0.05
			100.00

# Chromatogram

Sample Name : Carotte semence      Sample #: 289ac503      Page 1 of 1  
File Name : C:\Data\Colonne Apolaire\Huiles Essentielles\Carotte\Semences\2015\carotte semences 151123.raw  
Date : 24/11/2015 16:46:34  
Method : carotte semences.mth      Time of Injection: 23/11/2015 22:24:22  
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

