

Certificate of Analysis

Analysed essential oil : **Chamomile (roman type)**

Analysis date : June, 02th 2017

Batch : 253DA603

Shelf life : September 2019

❖ General description

| | | | |
|---------------|---------------------------|--------|--------|
| Essential oil | Chamomile (roman type) | Origin | France |
| Latin name | <i>Chamaemalum nobile</i> | | |

❖ Organoleptic characteristics

| | |
|------------|-------------------------|
| Appearance | Clear and mobile liquid |
| Colour | Pale yellow |
| Odour | Characteristic |

❖ Physico-chemical characteristics

| | Results (at 20°C) | Technical specifications | | | | |
|------------------|----------------------|--------------------------|---|-------------------|---|--------|
| Specific gravity | 0.900 | 0.900 | < | d | < | 0.920 |
| Refractive index | 1.4389 | 1.4380 | < | IR | < | 1.4470 |
| Optical rotation | +0,15° | -2° | < | $[\alpha]^{20}_d$ | < | +3° |

❖ Volatile elucidation

GC : Perkin Elmer – Clarus 500

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

Injection : split

Detector : FID

Carrier gas : H₂

⇒ See Chromatogram : polar column

Date : 2017-06-02

Software Version : 6.3.2.0646
Sample Name : HE Camomille Romaine 253DA603
Instrument Name : CLARUS 500
Rack/Vial : 0/3
Sample Amount : 1.000000
Cycle : 3

Date : 6/2/2017 10:14:32 AM
Data Acquisition Time : 6/1/2017 8:07:44 PM
Channel : B
Operator : Clemence
Dilution Factor : 1.000000

Result File :
Sequence File : C:\Sequences\CPG\2017\170601.seq

Rapport d'analyse

colonne polaire Elite WAX

| pic # | Nom composant | TR [min] | Aire [%] |
|-------|--------------------------------|----------|----------|
| 1 | | 2.96 | 0.07 |
| 2 | pinene<alpha> | 3.09 | 1.54 |
| 3 | | 3.55 | 0.09 |
| 4 | camphene | 3.72 | 0.42 |
| 5 | | 4.03 | 0.08 |
| 6 | | 4.12 | 0.11 |
| 7 | isobutyl iso butyrate | 4.25 | 4.76 |
| 8 | pinene<beta> | 4.47 | 0.16 |
| 9 | isoamyl acetate | 4.82 | 0.50 |
| 10 | | 5.02 | 0.03 |
| 11 | | 5.25 | 0.05 |
| 12 | | 5.44 | 0.06 |
| 13 | isobutyl methacrylate | 5.91 | 1.38 |
| 14 | isobutyl-2-methyl butanoate | 6.19 | 0.79 |
| 15 | butyl angelate | 6.28 | 0.30 |
| 16 | | 6.48 | 0.07 |
| 17 | limonene | 6.64 | 0.60 |
| 18 | isoamyl isobutyrate | 6.74 | 3.08 |
| 19 | | 6.89 | 0.18 |
| 20 | | 7.56 | 0.04 |
| 21 | | 8.14 | 0.21 |
| 22 | 2-methylbutenyl methacrylate | 8.27 | 1.47 |
| 23 | | 8.48 | 0.27 |
| 24 | cymene<p> | 8.72 | 0.11 |
| 25 | isoamyl methacrylate+hexyl ace | 9.04 | 0.84 |
| 26 | | 9.32 | 0.51 |
| 27 | isobutyl angelate | 9.62 | 36.23 |
| 28 | | 9.85 | 0.05 |
| 29 | | 9.94 | 0.03 |
| 30 | | 10.47 | 0.10 |
| 31 | | 11.42 | 0.83 |
| 32 | | 11.64 | 0.06 |
| 33 | | 11.78 | 0.08 |
| 34 | | 11.88 | 0.45 |
| 35 | methyl allyl angelate | 12.51 | 8.82 |
| 36 | | 12.73 | 0.03 |
| 37 | | 12.89 | 0.04 |
| 38 | 2-methylbutyl angelate | 13.09 | 4.30 |
| 39 | isoamyl angelate | 13.27 | 17.02 |
| 40 | | 14.02 | 0.06 |
| 41 | | 14.45 | 0.04 |
| 42 | | 14.96 | 0.08 |
| 43 | | 15.17 | 0.13 |
| 44 | | 15.37 | 0.02 |
| 45 | | 15.60 | 0.03 |
| 46 | | 15.76 | 0.84 |
| 47 | | 15.87 | 0.23 |
| 48 | | 16.21 | 0.08 |
| 49 | | 16.93 | 0.06 |
| 50 | | 17.12 | 0.25 |
| 51 | | 17.57 | 0.50 |
| 52 | pinocamphone<cis> | 17.89 | 0.20 |
| 53 | | 17.98 | 0.04 |
| 54 | | 18.64 | 0.10 |
| 55 | pinocarvone | 18.77 | 2.65 |
| 56 | | 19.50 | 0.18 |
| 57 | | 20.16 | 0.14 |

6/2/2017 10:14:32 AM Result:

| pic # | Nom composant | TR [min] | Aire [%] |
|-------|-------------------|----------|----------|
| 58 | | 20.28 | 0.09 |
| 59 | | 20.46 | 0.02 |
| 60 | myrtenal | 20.88 | 0.61 |
| 61 | | 21.10 | 0.04 |
| 62 | | 21.87 | 0.04 |
| 63 | pinocarveol trans | 22.25 | 4.50 |
| 64 | | 23.06 | 0.04 |
| 65 | | 23.16 | 0.10 |
| 66 | | 23.29 | 0.09 |
| 67 | | 23.42 | 0.05 |
| 68 | borneol | 23.92 | 0.14 |
| 69 | | 24.02 | 0.07 |
| 70 | | 24.31 | 0.04 |
| 71 | | 25.24 | 0.08 |
| 72 | | 26.13 | 0.04 |
| 73 | | 26.30 | 0.05 |
| 74 | | 26.47 | 0.03 |
| 75 | | 26.65 | 0.08 |
| 76 | myrtenol | 27.14 | 0.73 |
| 77 | | 28.61 | 0.03 |
| 78 | | 30.00 | 0.51 |
| 79 | | 30.33 | 0.06 |
| 80 | | 30.74 | 0.31 |
| 81 | | 31.38 | 0.03 |
| 82 | | 33.77 | 0.04 |
| 83 | | 34.02 | 0.11 |
| 84 | | 36.71 | 0.11 |
| 85 | | 38.22 | 0.05 |
| 86 | | 38.98 | 0.08 |
| 87 | | 39.27 | 0.06 |
| 88 | | 41.16 | 0.03 |
| 89 | | 42.94 | 0.35 |
| | | | 100.00 |

Laboratoire Rosier Davenne

Chromatogram

Sample Name : HE Camomille Romaine 253DA603 Sample #: 253DA603 Page 1 of 1
FileName : C:\Data\Colonne Apolaire\Huiles Essentielles\Camomille\Camomille Romaine\2017\camomille romaine 170601.raw
Date : 6/2/2017 10:14:33 AM
Method : camomille romaine.mth Time of Injection: 6/1/2017 8:07:44 PM
Start Time : 0.00 min End Time : 82.00 min Low Point : -47.13 mV High Point : 993.88 mV
Plot Offset: -47.13 mV Plot Scale: 1041.0 mV

