

Laboratoire Rosier Davenne

CERTIFICATE OF ANALYSIS

Model/Product/Revision/Date of revision : BAHEEN001 / Peppermint EO / 0 / 08-02-19
Modification(s) : none
Published : 08/04/2020

p1/1

Peppermint EO

Laboratoire Rosier Davenne code : **01M/MENPIP**

Date of analysis : 24/02/2020

Batch number : **020ND006**

Retest date (shelf life): **02/2023**

❖ General description

| | | | |
|---------------|------------------------|--------|--------|
| Essential oil | Peppermint EO | Origin | France |
| Latin name | <i>Mentha piperita</i> | | |

❖ Sensory quality

| | | |
|--------|-------------------------|---------|
| Aspect | Clear and mobile liquid | Conform |
| Color | Pale yellow | Conform |
| Odor | Characteristic, minty | Conform |

❖ Analytical quality

| | Laboratoire Rosier Davenne specifications | Results | Conclusion |
|-------------------------|---|----------------|----------------|
| Density (20°C) | 0,901 - 0,916 | 0.904 | Conform |
| Refractive index (20°C) | 1,4600 - 1,4670 | 1.4611 | Conform |
| Optical rotation (20°C) | -29° à -10° | -23.55 | Conform |
| Peroxide index | Not applicable | Not applicable | Not Applicable |

❖ Chromatography analyse

GC : Perkin Elmer - Clarus

Column : see report

Injection : split

Detector : FID

Carrier gas : H2

-> See chromatography attached

❖ Conclusion

Batch accepted.

Software Version : 6.3.4.0700
 Sample Name : HE Menthe poivree 020ND006
 Instrument Name : Clarus 590
 Rack/Vial : 0/1
 Sample Amount : 1.000000
 Cycle : 1

Date : 25/02/2020 08:41:56
 Data Acquisition Time : 24/02/2020 17:51:32
 Channel : B
 Operator : Sarah
 Dilution Factor : 1.000000

Result File :
 Sequence File : C:\Clarus 590\Sequences\2020\200224.seq

Rapport d'analyse - Laboratoire Rosier Davenne

Colonne polaire : Elite-Wax 60m, Ø 0,25mm, 0.25µm df

| Pic # | Component Name | Tr [min] | Area [%] |
|-------|--------------------------------|----------|----------|
| 1 | | 4.86 | 0.01 |
| 2 | pinene <alpha> | 6.04 | 0.63 |
| 3 | thujene <alpha> | 6.12 | 0.03 |
| 4 | | 6.42 | 0.02 |
| 5 | | 6.61 | 0.03 |
| 6 | camphene | 6.97 | 0.03 |
| 7 | | 7.35 | 0.01 |
| 8 | pinene <beta> | 7.99 | 0.90 |
| 9 | sabinene | 8.33 | 0.36 |
| 10 | myrcene | 9.56 | 0.20 |
| 11 | | 9.59 | 0.01 |
| 12 | terpinene <alpha> | 10.07 | 0.18 |
| 13 | limonene | 10.69 | 2.21 |
| 14 | | 10.81 | 0.10 |
| 15 | cineole <1,8> | 11.02 | 4.50 |
| 16 | | 11.18 | 0.02 |
| 17 | ocimene <(Z)-beta> | 11.91 | 0.24 |
| 18 | terpinene <gamma> | 12.29 | 0.31 |
| 19 | ocimene<(E)-beta> | 12.51 | 0.08 |
| 20 | cymene <p> | 13.14 | 0.17 |
| 21 | | 13.58 | 0.04 |
| 22 | terpinolene | 13.64 | 0.10 |
| 23 | | 14.17 | 0.07 |
| 24 | | 15.70 | 0.03 |
| 25 | | 16.19 | 0.04 |
| 26 | | 17.39 | 0.04 |
| 27 | octanol <3> | 17.85 | 0.32 |
| 28 | | 18.26 | 0.03 |
| 29 | | 20.08 | 0.12 |
| 30 | menthone | 20.57 | 24.70 |
| 31 | menthofuran | 21.29 | 1.47 |
| 32 | menthone <iso> | 21.56 | 3.13 |
| 33 | | 21.66 | 0.04 |
| 34 | | 21.78 | 0.13 |
| 35 | bourbonene <beta> | 22.82 | 0.41 |
| 36 | | 23.21 | 0.15 |
| 37 | | 23.56 | 0.07 |
| 38 | isopulegol | 23.80 | 0.06 |
| 39 | linalool | 23.87 | 0.28 |
| 40 | | 24.27 | 0.10 |
| 41 | | 24.38 | 0.05 |
| 42 | menthyl acetate | 24.52 | 3.62 |
| 43 | | 24.65 | 0.23 |
| 44 | | 24.95 | 0.13 |
| 45 | | 25.11 | 0.17 |
| 46 | | 25.58 | 0.17 |
| 47 | menthol<neo>+caryophyllene<(E) | 25.78 | 6.72 |
| 48 | terpinen-4-ol | 25.87 | 0.46 |
| 49 | | 26.06 | 0.07 |

25/02/2020 08:41:56 Result:

| Pic # | Component Name | Tr [min] | Area [%] |
|-------|-------------------|----------|----------|
| 50 | menthol <iso> | 26.93 | 0.59 |
| 51 | menthol+pulegone | 27.49 | 42.35 |
| 52 | | 28.18 | 0.03 |
| 53 | | 28.32 | 0.03 |
| 54 | | 28.38 | 0.22 |
| 55 | | 28.50 | 0.49 |
| 56 | | 28.76 | 0.15 |
| 57 | | 29.40 | 0.19 |
| 58 | | 29.58 | 0.06 |
| 59 | terpineol <alpha> | 29.91 | 1.25 |
| 60 | germacrene D | 30.31 | 0.83 |
| 61 | piperitone | 30.78 | 0.24 |
| 62 | | 31.74 | 0.03 |
| 63 | | 31.93 | 0.10 |
| 64 | | 32.04 | 0.10 |
| 65 | cadinene <delta> | 33.94 | 0.03 |
| 66 | | 39.18 | 0.06 |
| 67 | | 42.54 | 0.17 |
| 68 | | 43.72 | 0.03 |
| 69 | | 44.96 | 0.05 |
| | | | 100.00 |

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Chromatogram

Sample Name : HE Menthe poivrée 020ND006 Sample # : 2 Page 1 of 1
File Name : C:\Clarus 590\Data\Colonne Polaire\2020\200224_HE Menthe poivrée 020ND006_002.raw
Date : 25/02/2020 08:42:23
Method : Menthe poivrée.mth Time of Injection: 24/02/2020 17:51:32
Start Time : 0.00 min End Time : 80.00 min Low Point : -45.08 mV High Point : 954.92 mV
Plot Offset: -45.08 mV Plot Scale: 1000.0 mV

