



NHR ORGANIC OILS  
24 CHATHAM PLACE, BRIGHTON, BN1 3TN, UK  
+44 (0)1273 746505 [info@nhrorganicoils.com](mailto:info@nhrorganicoils.com) [www.nhrorganicoils.com](http://www.nhrorganicoils.com)

*Certificate of Analysis & Gas Chromatography*  
**Organic Rhododendron Essential Oil**  
*(Rhododendron anthopogon)*

**Batch number:** 210325-1

**Origin:** Nepal

| Compound                             | CAS N°           | TR (min)      | Content (%)   | Cosmetic Allerg. |
|--------------------------------------|------------------|---------------|---------------|------------------|
| $\alpha$ -Thujene                    | 2867-05-2        | 5.457         | 0.241         |                  |
| Tricyclene                           | 508-32-7         | 5.507         | 0.062         |                  |
| <b><math>\alpha</math>-Pinene</b>    | <b>80-56-8</b>   | <b>5.595</b>  | <b>30.817</b> | Oui/Yes          |
| Camphene                             | 79-92-5          | 5.759         | 0.340         |                  |
| <b><math>\beta</math>-Myrcene</b>    | <b>123-35-3</b>  | <b>5.920</b>  | <b>1.488</b>  |                  |
| <b><math>\beta</math>-Pinene</b>     | <b>127-91-3</b>  | <b>6.030</b>  | <b>13.051</b> | Oui/Yes          |
| $\alpha$ -Phellandrene               | 99-83-2          | 6.223         | 0.045         |                  |
| $\beta$ -Thujene                     | 28634-89-1       | 6.273         | 0.072         |                  |
| $\alpha$ -Terpinene                  | 99-86-5          | 6.328         | 0.152         |                  |
| <b>(E)-Beta Ocimene</b>              | <b>3779-61-1</b> | <b>6.380</b>  | <b>3.712</b>  |                  |
| <b>P-Cymene</b>                      | <b>99-87-6</b>   | <b>6.412</b>  | <b>1.100</b>  |                  |
| <b>D-Limonene</b>                    | <b>5989-27-5</b> | <b>6.493</b>  | <b>8.563</b>  | Oui/Yes          |
| $\beta$ -Phellandrene                | 555-10-2         | 6.544         | 0.166         |                  |
| <b><math>\gamma</math>-Terpinene</b> | <b>99-85-4</b>   | <b>6.784</b>  | <b>2.081</b>  |                  |
| Isoterpinolene                       | 586-63-0         | 7.178         | 0.783         |                  |
| Allo-ocimene                         | 673-84-7         | 7.597         | 0.249         |                  |
| Terpinen-4-ol                        | 562-74-3         | 8.739         | 0.216         |                  |
| $\alpha$ -Terpineol                  | 98-55-5          | 8.955         | 0.360         | Oui/Yes          |
| Bornyl acetate                       | 76-49-3          | 10.835        | 0.154         |                  |
| Citronellyl acetate                  | 150-84-5         | 12.047        | 0.186         |                  |
| Cadina-3,5-diene                     | 267665-20-3      | 12.497        | 0.393         |                  |
| $\alpha$ -Cubebene                   | 17669-14-8       | 13.249        | 0.127         |                  |
| <b>Copaene</b>                       | <b>3856-25-5</b> | <b>13.432</b> | <b>1.017</b>  |                  |
| $\beta$ -Elemene                     | 515-13-9         | 13.688        | 0.285         |                  |
| (-)- $\beta$ -Bourbonene             | 5208-59-3        | 13.729        | 0.252         |                  |

| Compound                                | CAS N°            | TR (min)      | Content (%)    |
|---|-------------------|---------------|----------------|
| $\beta$ -Patchoulene                    | 514-51-2          | 14.427        | 0.201          |
| Mesitylene                              | 108-67-8          | 14.739        | 0.109          |
| <b><math>\beta</math>-Caryophyllene</b> | <b>87-44-5</b>    | <b>14.890</b> | <b>3.388</b>   |
| (Z)-Muurolo-4(15),5-diene               | 157477-72-0       | 15.096        | 0.287          |
| $\beta$ -Farnesene                      | 28973-97-9        | 15.212        | 0.487          |
| Aromandendrene                          | 489-39-4          | 15.433        | 0.446          |
| Bicyclosésquiphellandrene               | 54324-03-7        | 15.676        | 0.296          |
| Humulene                                | 6753-98-6         | 15.961        | 0.646          |
| $\beta$ -Gurjunene                      | 17334-55-3        | 16.124        | 0.783          |
| <b><math>\gamma</math>-Muurolene</b>    | <b>30021-74-0</b> | <b>16.408</b> | <b>2.209</b>   |
| $\alpha$ -Muurolene                     | 483-75-0          | 16.537        | 0.126          |
| (+)-Epi-Bicyclosésquiphellandrene       | 54274-73-6        | 16.729        | 0.198          |
| $\alpha$ -Cubebene                      | 17699-14-8        | 16.909        | 0.457          |
| <b><math>\gamma</math>-Gurjunene</b>    | <b>22567-17-5</b> | <b>17.058</b> | <b>1.459</b>   |
| <b>Isoledene</b>                        | <b>31983-22-9</b> | <b>17.162</b> | <b>2.730</b>   |
| <b><math>\gamma</math>-Selinene</b>     | <b>515-17-3</b>   | <b>17.273</b> | <b>1.527</b>   |
| <b><math>\gamma</math>-Cadinene</b>     | <b>39029-41-9</b> | <b>17.743</b> | <b>3.237</b>   |
| <b><math>\delta</math>-Cadinene</b>     | <b>483-76-1</b>   | <b>17.862</b> | <b>8.231</b>   |
| (E)-Calamenene                          | 73209-42-4        | 17.976        | 0.408          |
| Epizonarene                             | 41702-63-0        | 18.027        | 0.434          |
| Cubenene                                | 2983-12-5         | 18.332        | 0.322          |
| $\alpha$ -Cadinene                      | 24406-05-1        | 18.472        | 0.554          |
| $\alpha$ -Calacorene                    | 21391-99-1        | 18.662        | 0.102          |
| $\delta$ -Cadinol                       | 19435-97-3        | 22.239        | 0.913          |
| $\gamma$ -Gurjunene                     | 22567-17-5        | 22.673        | 0.696          |
|   |                   |               | <b>96.19 %</b> |

#### Programmation en T°

#### Operatory conditions of analysis

- Colonne : Elite 5MS 60 m x 0.18 mm x 18  $\mu$ m
- Dilution : 1 % dans l'hexane
- Injection : 1  $\mu$ l. Split 60

| Rampe   | Vitesse (°C/min) | T °C | Durée (min) |
|---------|------------------|------|-------------|
| Initial | -                | 65   | 0           |
| 1       | 30.0             | 135  | 3           |
| 2       | 3.0              | 210  | 0           |
| 3       | 30.0             | 290  | 6.57        |