

SERVICE DE SPECTROMETRIE DE MASSE DE L'ISIC (SSMI)

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ANALYSES GC-MS

Le 06 Mars 2013

Objet: Analyse d'une huile essentielle d'Eucalyptus
Nom latin: *Eucalyptus radiata Siebold* (Myrtacées)
Lot: **EUCAB406N003**
Provenance: Australie
Partie distillée: Feuilles
Destinataire : Entreprise Gedane (Lausanne, Suisse)

Composés majoritaires:

| Nom | N° CAS | N° CE (EINECS) | Caractéristiques |
|---------------------|-----------|----------------|------------------------------|
| Eucalyptol | 470-82-6 | 207-431-5 | R10 |
| α -Terpineol | 98-55-5 | 202-680-6 | R38, Xi |
| D-Limonene | 8989-27-5 | 227-813-5 | N, Xi, R10, R38, R43, R50/53 |

CONDITIONS EXPERIMENTALES

Type d'instrument : CP-3800 couplé au 1200L Triple quadrupole MS/MS (Varian)
Mode d'ionisation : Impact électronique (IE), 70 eV (mode positif)
Gamme de masse : m/z 50-300 en 0.5 sec
Colonne : FactorFour VF-5ms (5% phenyl-methyl 95% dimethyl polysiloxane, 0.25mm x 30 m)
Débit : 1 mL/min
Gradient : 3 min à 50°C ; Montée à 150°C en 20 min puis à 250°C en 7 min
Calibrant : FC43
Echantillons : Huile essentielle diluée 1:1000 dans l'éther. Injection de 1 μ L.

Figure 1 – Chromatogramme TIC-GC/MS d'huile essentielle d'Eucalyptus (EUCAB406N003) analysée sur colonne capillaire FactorFour VF-5ms (5% phenyl-methyl 95% diméthylpolysiloxane, 0.25mm x 30 m). Les numéros des pics sont reportés dans la Table 1.

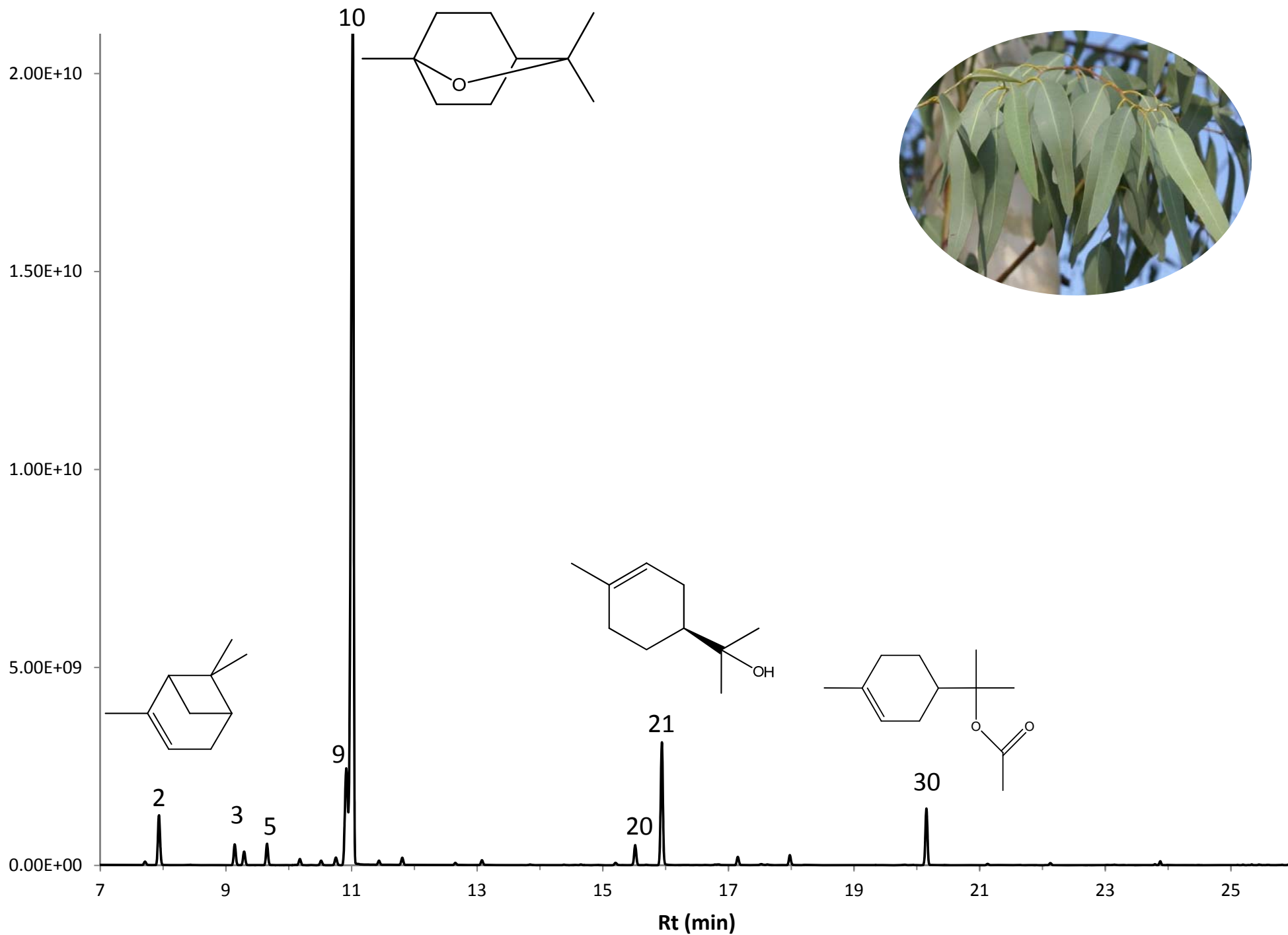


Table 1 – Composition de l'huile essentielle d'Eucalyptus (EUCAB406N003)

| N° | Retention Time (min.) | Area | % of Total | Identification (NIST 11/MassFinder) | Prob (%) |
|----|-----------------------|-----------------|--------------|---|-----------|
| 1 | 7.71 | 2.10E+08 | 0.22 | α -Thujene | 79 |
| 2 | 7.93 | 3.08E+09 | 3.20 | α-Pinene | 72 |
| 3 | 9.14 | 1.23E+09 | 1.28 | Sabinene | 85 |
| 4 | 9.29 | 8.33E+08 | 0.87 | β -Pinene | 82 |
| 5 | 9.65 | 1.24E+09 | 1.29 | Myrcene | 82 |
| 6 | 10.18 | 3.77E+08 | 0.39 | α -Phellandrene | 76 |
| 7 | 10.52 | 2.74E+08 | 0.28 | α -Terpinene | 64 |
| 8 | 10.75 | 4.78E+08 | 0.50 | m/p-Cymene | 86 |
| 9 | 10.92 | 7.62E+09 | 7.92 | D-Limonene | 74 |
| 10 | 11.02 | 6.54E+10 | 67.98 | Eucalyptol | 90 |
| 11 | 11.44 | 2.29E+08 | 0.24 | (E)- β -Ocimene | 57 |
| 12 | 11.81 | 4.23E+08 | 0.44 | γ -Terpinene | 80 |
| 13 | 12.65 | 1.18E+08 | 0.12 | Terpinolene | 67 |
| 14 | 13.08 | 2.94E+08 | 0.31 | Linalool | 83 |
| 15 | 13.84 | 3.74E+07 | 0.04 | Cis-p-Menth-2-en-1-ol | 60 |
| 16 | 14.38 | 2.79E+07 | 0.03 | Trans-p-Menth-2-en-1-ol | 20 |
| 17 | 14.65 | 3.40E+07 | 0.04 | β -Citronellal | 85 |
| 18 | 14.92 | 1.06E+07 | 0.01 | Cis-Verbenol | 30 |
| 19 | 15.20 | 1.67E+08 | 0.17 | δ -Terpineol | 69 |
| 20 | 15.52 | 1.24E+09 | 1.29 | 4-Terpineol | 69 |
| 21 | 15.94 | 7.60E+09 | 7.90 | α-Terpineol | 84 |
| 22 | 16.35 | 1.24E+07 | 0.01 | Trans-Piperitol | 62 |
| 23 | 16.79 | 3.12E+07 | 0.03 | Nerol | 28 |
| 24 | 16.84 | 5.63E+07 | 0.06 | Citronellol | 20 |
| 25 | 17.15 | 5.05E+08 | 0.52 | Neral (β -Citral) | 53 |
| 26 | 17.52 | 9.24E+07 | 0.10 | Geraniol | 36 |
| 27 | 17.62 | 4.42E+07 | 0.05 | Piperitone | 72 |
| 28 | 17.98 | 5.84E+08 | 0.61 | Geranial (α -Citral) | 68 |
| 29 | 19.81 | 2.60E+07 | 0.03 | Bicycloelemene | 20 |
| 30 | 20.15 | 3.37E+09 | 3.50 | α-Terpinyl Acetate | 57 |
| 31 | 20.44 | 7.62E+06 | 0.01 | Neryl Acetate | 25 |
| 32 | 20.95 | 1.58E+07 | 0.02 | Geranyl Acetate | 54 |
| 33 | 21.13 | 7.68E+07 | 0.08 | Methyl Cinnamate | 77 |
| 34 | 22.13 | 1.27E+08 | 0.13 | β -Carophyllene | 68 |
| 35 | 23.03 | 1.11E+07 | 0.01 | α -Humulene | 18 |
| 36 | 23.14 | 2.43E+07 | 0.03 | Aromadendrene | 10 |
| 37 | 23.79 | 4.96E+07 | 0.05 | α -Muurolene | 65 |
| 38 | 23.88 | 1.97E+08 | 0.21 | Elixene | 78 |
| 39 | 25.20 | 2.08E+07 | 0.02 | Spathulenol | 36 |
| 40 | 25.33 | 2.64E+07 | 0.03 | Globulol | 20 |

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