

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

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### *ANALYSES GC-MS*

Le 15 Juin 2011

**Objet:** Analyse d'une huile essentielle par GC-MS  
**Nom:** Tea Tree  
**Lot:** TEAB890N33  
**Destinataire :** Entreprise Gedane (Lausanne, Suisse)  
**Composés majoritaires:** 4-Terpineol ;  $\gamma$ -Terpinene

### *CONDITIONS EXPERIMENTALES*

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**Type d'instrument :** GC CP-3800 couplé au 1200L Triple quadrupole MS/MS (Varian)  
**Mode d'ionisation :** Impact électronique (IE), 70 eV (mode positif)  
**Gamme de masse :**  $m/z$  50-250 en 0.5 sec  
**Colonne :** FactorFour VF-5ms (5% phenyl-methyl 95% dimethyl polysiloxane, 0.25mm x 30 m)  
**Débit :** 1 mL/min  
**Gradient :** 50°C pendant 3 min; Montée à 150°C en 20 min; Montée à 250°C en 7 min  
**Calibrant :** FC43  
**Echantillons :** Huile essentielle diluée 1:500 dans l'éther. Injection de 1  $\mu$ L.

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Figure 1 – Chromatogramme TIC-GC/MS d'huile essentielle de Tea Tree (TEAB890N33) analysée sur colonne capillaire

FactorFour VF-5ms (5% phenyl-methyl 95% dimethylpolysiloxane, 0.25mm x 30 m). Les numéros des pics sont reportés dans la Table 1.

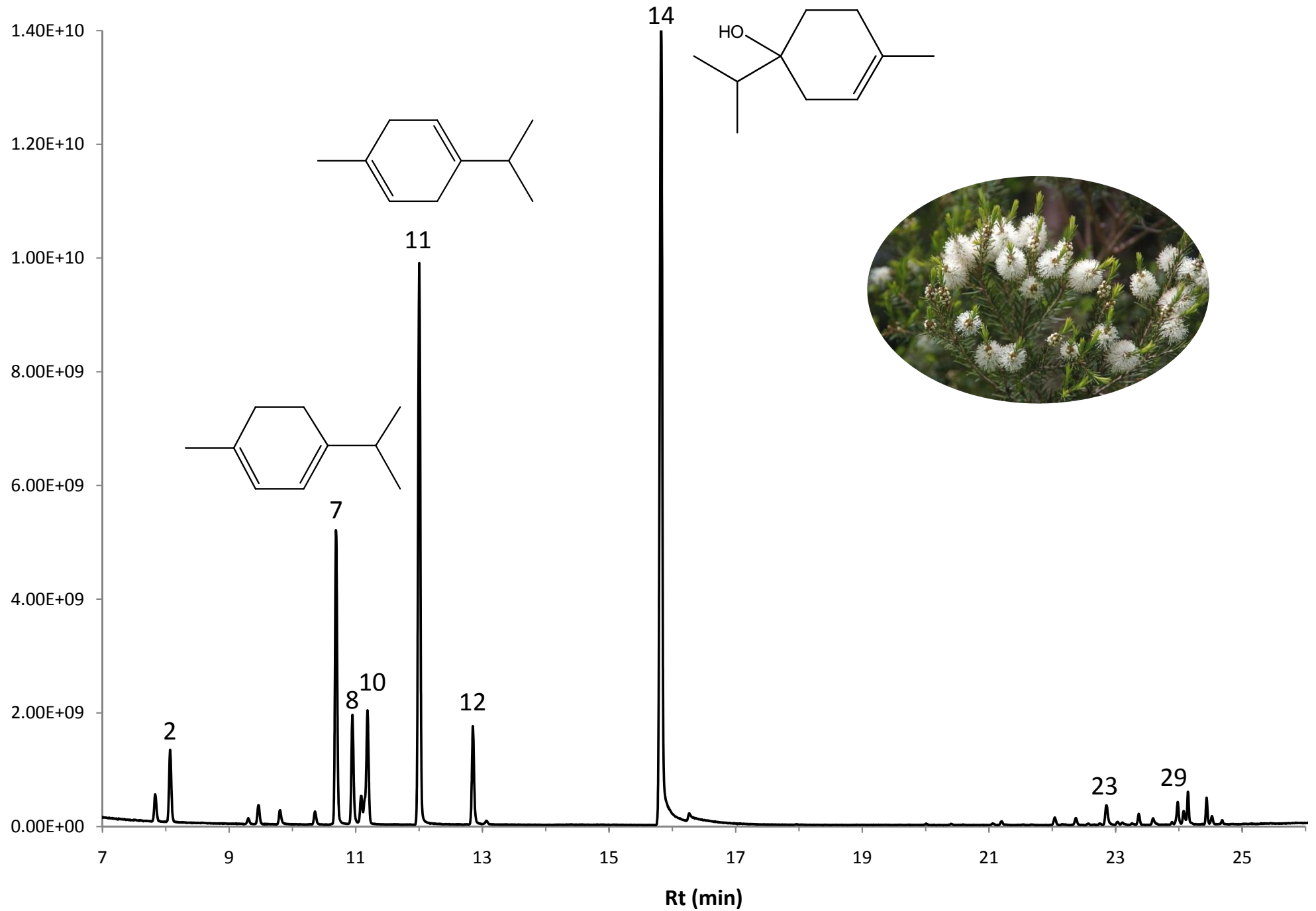


Table 1 – Composition de l'huile essentielle de Tea Tree (TEAB890N33)

N°	Retention Time (min.)	Area	% of Total	Identification (NIST 08/MassFinder)	Prob (%)
1	7.83	1.20E+09	1.09	$\alpha$ -Thujene	81
<b>2</b>	<b>8.07</b>	<b>3.17E+09</b>	<b>2.89</b>	<b><math>\alpha</math>-Pinene</b>	<b>89</b>
3	9.30	2.07E+08	0.19	Sabinene	79
4	9.47	8.50E+08	0.78	$\beta$ -Pinene	85
5	9.80	6.26E+08	0.57	Myrcene	20
6	10.36	5.65E+08	0.52	$\alpha$ -Phellandrene	73
<b>7</b>	<b>10.69</b>	<b>1.26E+10</b>	<b>11.53</b>	<b><math>\alpha</math>-Terpinene</b>	<b>68</b>
<b>8</b>	<b>10.95</b>	<b>4.71E+09</b>	<b>4.30</b>	<b>p-Cymene</b>	<b>84</b>
9	11.09	1.26E+09	1.15	D-Limonene	92
<b>10</b>	<b>11.19</b>	<b>5.80E+09</b>	<b>5.29</b>	<b>Eucalyptol</b>	<b>92</b>
<b>11</b>	<b>12.00</b>	<b>2.52E+10</b>	<b>23.03</b>	<b><math>\gamma</math>-Terpinene</b>	<b>80</b>
<b>12</b>	<b>12.85</b>	<b>4.31E+09</b>	<b>3.94</b>	<b>Terpinolene</b>	<b>64</b>
13	13.06	1.64E+08	0.15	2-Isopropyl-5-methylhex-2-enal	15
<b>14</b>	<b>15.82</b>	<b>4.25E+10</b>	<b>38.82</b>	<b>4-Terpineol</b>	<b>72</b>
15	16.27	2.67E+08	0.24	$\alpha$ -Terpineol	71
16	20.41	4.66E+07	0.04	$\alpha$ -Cubebene	20
17	21.07	7.15E+07	0.07	$\alpha$ -Ylangene	63
18	21.20	1.50E+08	0.14	Isodauc-6,9-diene	72
19	22.04	3.30E+08	0.30	$\alpha$ -Gurgujene / Isoledene	20 / 20
20	22.37	3.07E+08	0.28	$\beta$ -Caryophyllene	25
21	22.57	6.36E+07	0.06	$\gamma$ -Maaliene	10
22	22.75	6.76E+07	0.06	4aH,10aH-Guaia-1(5),6-diene / $\alpha$ -Panasinsene	61 / 45
<b>23</b>	<b>22.85</b>	<b>1.08E+09</b>	<b>0.99</b>	<b>Aromadendrene</b>	<b>15</b>
24	23.03	1.46E+08	0.13	Selina-4(15),7-diene	70
25	23.12	1.46E+08	0.13	Carota-5,8-diene	61
26	23.26	8.20E+07	0.07	$\alpha$ -Humulene	74
27	23.37	4.38E+08	0.40	Allo-Aromadendrene	61
28	23.59	2.94E+08	0.27	$\gamma$ -Amorphene	79
<b>29</b>	<b>23.98</b>	<b>9.48E+08</b>	<b>0.87</b>	<b>Ledene</b>	<b>66</b>
30	24.08	5.61E+08	0.51	Bicyclogermacrene	78
31	24.44	8.60E+08	0.79	$\omega$ -Cadinene	66
32	24.52	3.21E+08	0.29	coelution Zonaren / Isocalamenene	
33	24.68	1.22E+08	0.11	$\omega$ -Amorphene	73

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