

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

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### *ANALYSES GC-MS*

Le 28 Avril 2011

**Objet:** Analyse d'une huile essentielle par GC-MS  
**Nom:** Cannelle écorce  
**Lot:** CIN501H080046  
**Destinataire :** Entreprise Gedane (Lausanne, Suisse)  
**Composés majoritaires:** Cinnamaldehyde,(E);  $\beta$ -Caryophyllene

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### *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 d'écorce de Cannelle (CIN501H080046) 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.

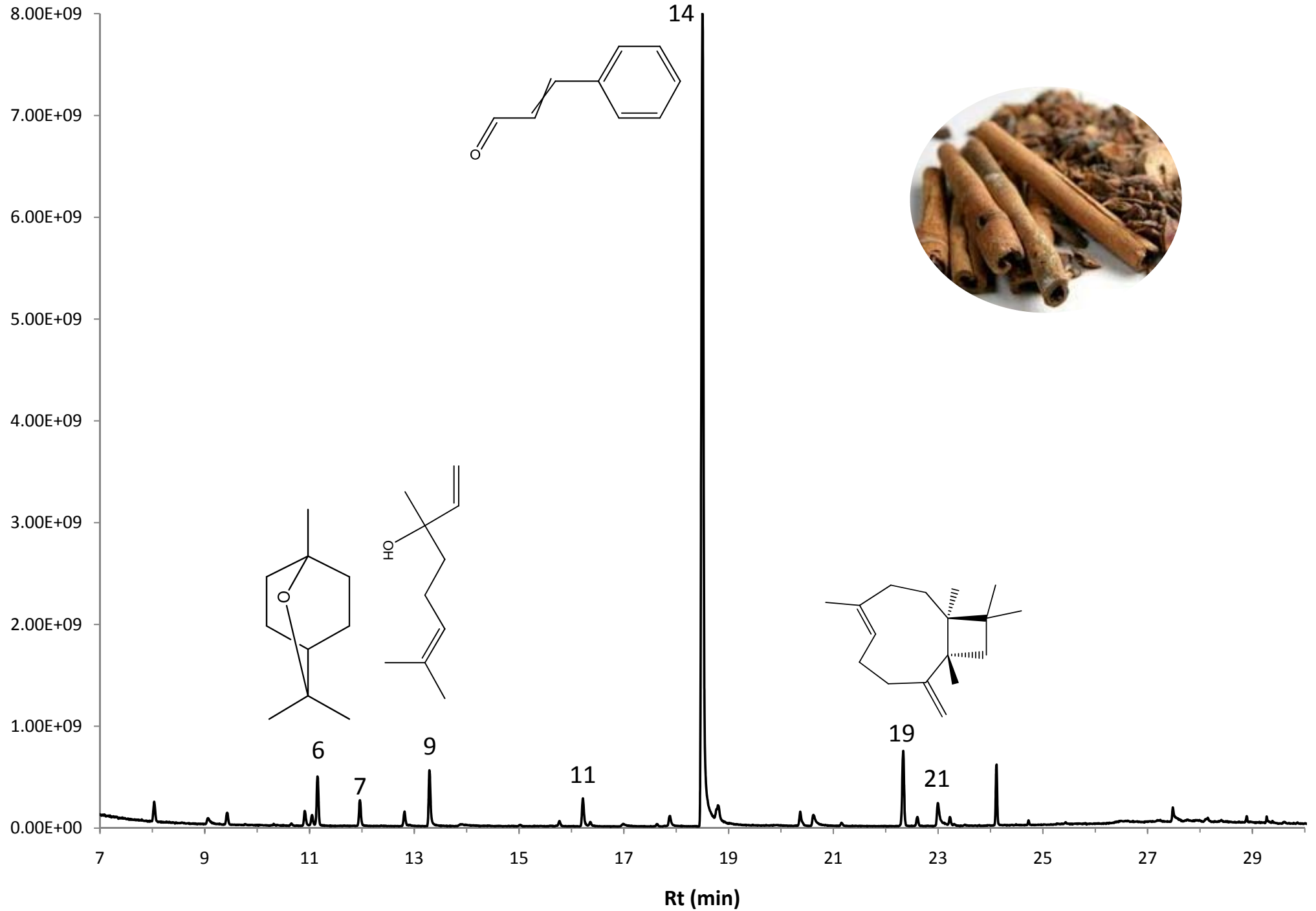


Table 1 – Composition de l'huile essentielle d'écorce de Cannelle (CIN501H080046)

N°	Retention Time (min.)	Area	% of Total	Identification (NIST 08/MassFinder)	Prob (%)
1	8.03	3.67E+08	1.00	$\alpha$ -Pinene	69
2	9.06	1.80E+08	0.49	benzaldehyde	57
3	9.43	3.06E+08	0.83	$\beta$ -Pinene	80
4	10.91	3.37E+08	0.92	p-Cymene	84
5	11.05	2.52E+08	0.69	D-Limonene	23
<b>6</b>	<b>11.15</b>	<b>1.21E+09</b>	<b>3.28</b>	<b>Eucalyptol</b>	<b>95</b>
<b>7</b>	<b>11.96</b>	<b>6.22E+08</b>	<b>1.69</b>	<b><math>\alpha</math>-Terpinene</b>	<b>85</b>
8	12.81	3.29E+08	0.90	Terpinolene	41
<b>9</b>	<b>13.29</b>	<b>1.36E+09</b>	<b>3.71</b>	<b>Linalool</b>	<b>72</b>
10	15.77	1.11E+08	0.30	4-Terpineol	77
<b>11</b>	<b>16.22</b>	<b>7.31E+08</b>	<b>1.99</b>	<b><math>\alpha</math>-Terpineol</b>	<b>50</b>
12	16.36	1.01E+08	0.27	$\gamma$ -Terpineol	10
13	17.88	2.90E+08	0.79	2-phenylethyl Acetate	72
<b>14</b>	<b>18.50</b>	<b>2.56E+10</b>	<b>69.72</b>	<b>Cinnamaldehyde,(E)-</b>	<b>64</b>
15	18.80	5.84E+08	1.59	Trans-Anethol	72
16	20.37	4.10E+08	1.12	$\alpha$ -Terpinyl Acetate	35
17	20.62	4.09E+08	1.11	Eugenol	66
18	21.15	8.35E+07	0.23	$\alpha$ -Copaene	10
<b>19</b>	<b>22.33</b>	<b>1.86E+09</b>	<b>5.05</b>	<b><math>\beta</math>-Caryophyllene</b>	<b>35</b>
20	22.60	2.36E+08	0.64	Cis- $\alpha$ -Bergamotene	30
<b>21</b>	<b>23.00</b>	<b>8.22E+08</b>	<b>2.24</b>	<b>Cinnamyl Acetate</b>	<b>81</b>
22	23.22	2.41E+08	0.66	$\alpha$ -Humulene	45
23	24.73	7.65E+07	0.21	(E)- $\alpha$ -Bisabolene	68
24	27.48	2.06E+08	0.56	Benzyl Benzoate	96

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