

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

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### *ANALYSES GC-MS*

Le 28 Mars 2011

**Objet:** Analyse d'une huile essentielle par GC-MS  
**Nom:** Lavande  
**Lot:** LAVB535N002  
**Destinataire :** Entreprise Gedane (Lausanne, Suisse)  
**Composés majoritaires:** Linalol ; Linalyl Acetate

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### *CONDITIONS EXPERIMENTALES*

**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 µL.

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Figure 1 – Chromatogramme TIC-GC/MS d'huile essentielle de lavande (LAVB535N002) 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.

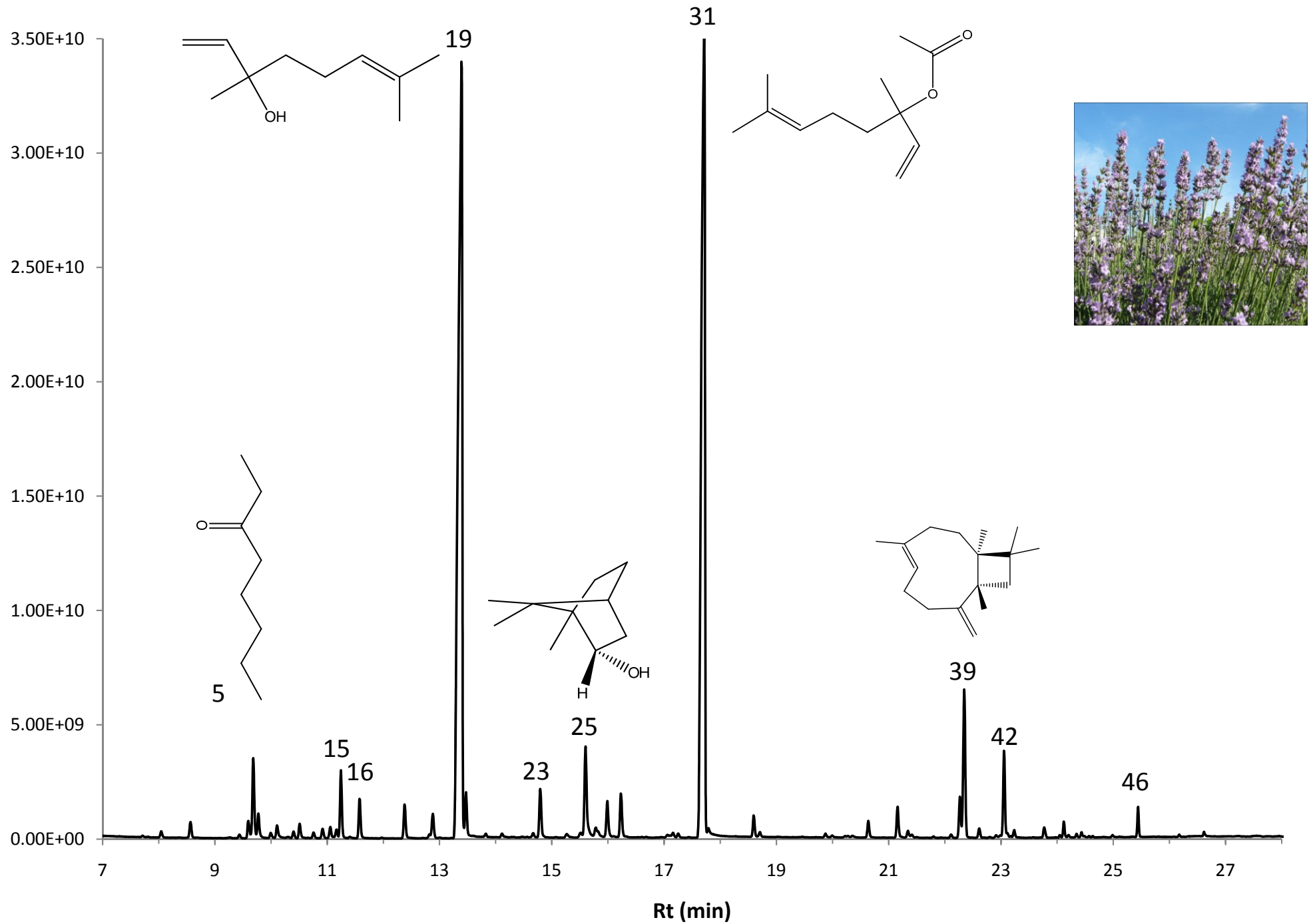


Table 1 – Composition de l'huile essentielle de Lavande (LAVB535N002)

N°	Retention Time (min.)	Area	% of Total	Identification (NIST 08/MassFinder)	Prob (%)
1	8.04	6.98E+08	0.16	$\alpha$ -Pinene	40
2	8.56	1.52E+09	0.34	Camphene	69
3	9.44	3.61E+08	0.08	Sabinene	44
4	9.59	1.89E+09	0.43	3-Octenol	90
<b>5</b>	<b>9.68</b>	<b>8.38E+09</b>	<b>1.90</b>	<b>3-Octanone</b>	<b>84</b>
6	9.77	2.73E+09	0.62	$\beta$ -Pinene	70
7	9.99	5.27E+08	0.12	Butyl Butylate	<b>73</b>
8	10.11	1.40E+09	0.32	3-Octanol	79
9	10.40	6.56E+08	0.15	D-3-Carene	91
10	10.51	1.50E+09	0.34	Hexyl Acetate	93
11	10.76	5.73E+08	0.13	m-cymene	85
12	10.92	9.99E+08	0.23	p-cymene	84
13	11.05	1.17E+09	0.26	Limonene	30
14	11.16	9.97E+08	0.23	Eucalyptol	<b>88</b>
<b>15</b>	<b>11.24</b>	<b>6.61E+09</b>	<b>1.50</b>	<b>Z-<math>\beta</math>-Ocimene</b>	<b>56</b>
<b>16</b>	<b>11.58</b>	<b>4.05E+09</b>	<b>0.92</b>	<b>E-<math>\beta</math>-Ocimene</b>	<b>25</b>
17	12.38	3.58E+09	0.81	trans-Linalooloxide	83
18	12.88	2.74E+09	0.62	Cis-Linalooloxide	73
<b>19</b>	<b>13.39</b>	<b>1.66E+11</b>	<b>37.63</b>	<b>Linalol</b>	<b>80</b>
20	13.47	4.53E+09	1.03	1-Octen-3-ol Acetate	63
21	14.11	4.77E+08	0.11	Allo-Ocimene	71
22	14.67	4.89E+08	0.11	Hexyl Isobutyrate	75
<b>23</b>	<b>14.79</b>	<b>5.50E+09</b>	<b>1.25</b>	<b>Camphor</b>	<b>64</b>
24	15.27	4.54E+08	0.10	Lavandulol	74
<b>25</b>	<b>15.60</b>	<b>1.18E+10</b>	<b>2.66</b>	<b>Borneol</b>	<b>71</b>
26	15.78	1.21E+09	0.27	4-Terpineol	60
27	15.99	3.91E+09	0.89	Hexyl Butyrate	74
28	16.23	5.01E+09	1.13	$\alpha$ -Terpineol	68
29	17.16	7.72E+08	0.17	Bornyl Formate	30
30	17.25	4.61E+08	0.10	Butanoic acid, 2-methyl-, hexyl ester	78
<b>31</b>	<b>17.71</b>	<b>1.56E+11</b>	<b>35.28</b>	<b>Linalyl Acetate</b>	<b>26</b>
32	17.79	7.85E+08	0.18	Geraniol	58
33	18.59	2.10E+09	0.48	Lavandulyl Acetate	68
34	18.71	4.98E+08	0.11	L-bornyl Acetate	41
35	20.64	1.74E+09	0.39	Neryl Acetate	77
36	21.16	3.30E+09	0.75	Geraniol Acetate	51
37	21.34	7.80E+08	0.18	Hexyl Caproate	93
38	22.27	4.32E+09	0.98	$\alpha$ -Santalene	49
<b>39</b>	<b>22.35</b>	<b>1.67E+10</b>	<b>3.78</b>	<b><math>\beta</math>-caryophyllene</b>	<b>49</b>
40	22.61	1.06E+09	0.24	Cis- $\alpha$ -Bergamotene	69

Table 1 – Composition de l'huile essentielle de Lavande (LAVB535N002) (Fin)

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41	22.91	3.03E+08	0.07	Trans- $\alpha$ -Bergamotene	63
<b>42</b>	<b>23.05</b>	<b>9.27E+09</b>	<b>2.10</b>	<b><math>\beta</math>-Farnesene</b>	<b>73</b>
43	23.24	7.13E+08	0.16	$\alpha$ -Caryophyllene	38
44	23.77	1.13E+09	0.26	Germacrene D	32
45	24.20	2.40E+08	0.05	$\beta$ -Bisabolene	61
<b>46</b>	<b>25.44</b>	<b>2.31E+09</b>	<b>0.52</b>	<b>Caryophyllene Oxide</b>	<b>78</b>
47	26.17	1.73E+08	0.04	t-Cadinol	46

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