

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

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## *ANALYSES GC-MS*

Le 13 Juillet 2012

**Objet:** Analyse d'une huile essentielle par GC-MS  
**Nom:** **Sapin Baumier**  
**Lot:** **SAPB847N004**  
**Destinataire :** Entreprise Gedane (Lausanne, Suisse)  
**Composés majoritaires:**  **$\beta$ -Pinene ;  $\delta$ -3-Carene ; Bornyl Acetate; Limonene**

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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 :**  $m/z$  50-300 en 0.5 sec

**Colonne :** FactorFour VF-5ms (5% phenyl-methyl 95% dimethyl polysiloxane, 0.25mm x 30 m)

**Débit :** 1 mL/min

**Gradient :** 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 Sapin Baumier (SAPB847N004) 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.

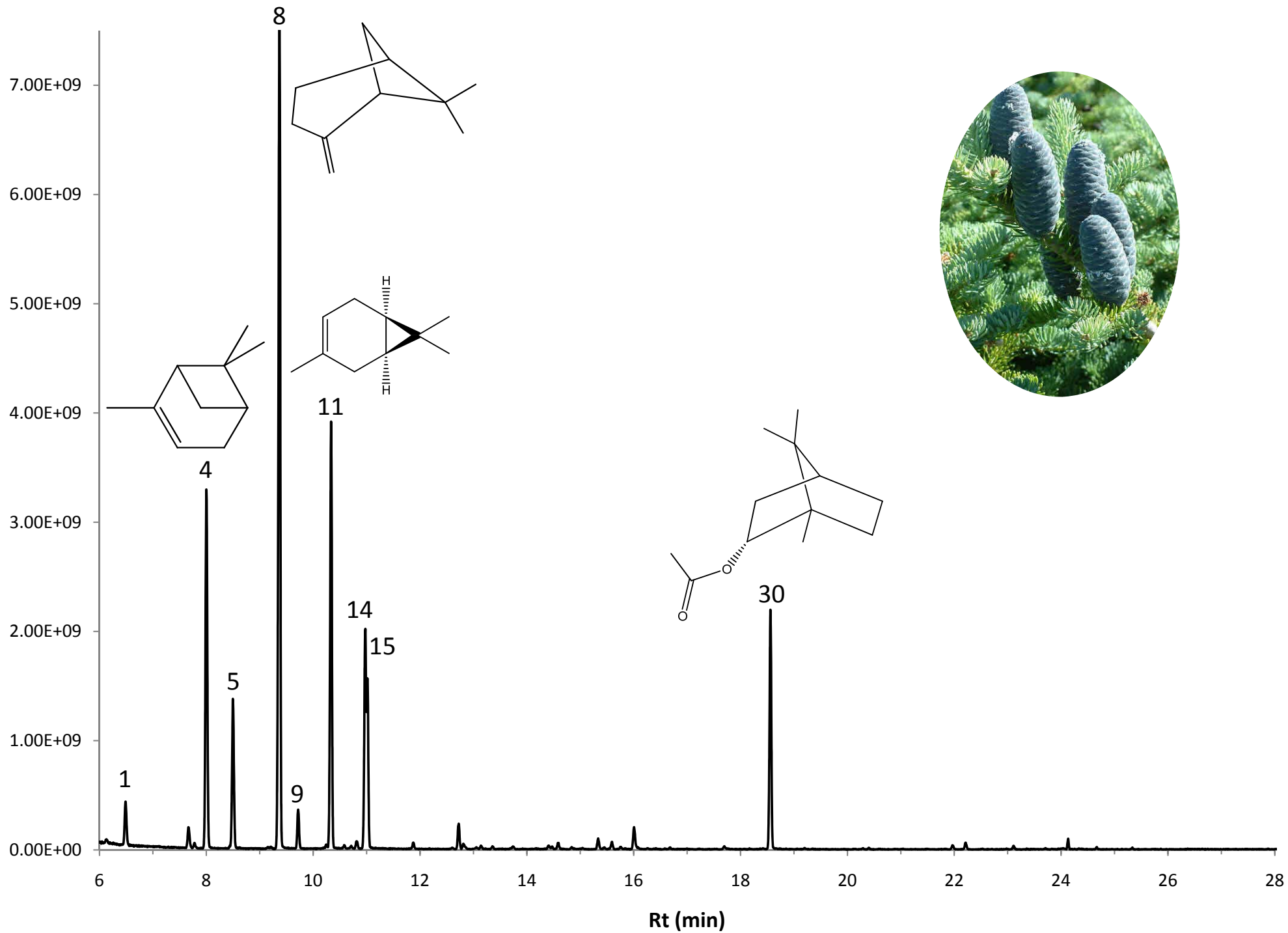


Table 1 – Composition de l'huile essentielle de Sapin Baumier (SAPB847N004)

N°	Retention Time (min.)	Area	% of Total	Identification (NIST 08/MassFinder)	Prob (%)
1	6.49	9.61E+08	1.7	Santene	47
2	7.67	4.28E+08	0.7	Tricyclene	82
3	7.78	9.94E+07	0.2	$\alpha$ -Thujene	79
4	8.00	8.09E+09	13.9	$\alpha$ -Pinene	67
5	8.50	3.31E+09	5.7	Camphene	75
6	9.15	3.39E+07	0.1	o-Cymene	70
7	9.21	3.27E+07	0.1	Sabinene	79
8	9.37	1.92E+10	32.9	$\beta$ -Pinene	75
9	9.72	8.37E+08	1.4	Myrcene	57
10	10.24	6.91E+07	0.1	$\alpha$ -Phellandrene	78
11	10.34	9.13E+09	15.7	$\delta$ 3-Carene	88
12	10.58	3.83E+07	0.1	$\delta$ 2-Carene	68
13	10.81	1.79E+08	0.3	p-Cymene	78
14	10.98	4.91E+09	8.4	Limonene	70
15	11.02	3.26E+09	5.6	$\beta$ -Phellandrene	81
16	11.87	1.27E+08	0.2	(Z)/(E)- $\beta$ -Ocimene	77/68
17	12.72	5.53E+08	0.9	Dehydrosabinaketone	65
18	12.81	1.51E+08	0.3	Fenchone	84
19	13.05	3.86E+07	0.1	$\alpha$ -Campholenal	59
20	13.14	6.21E+07	0.1	Linalool	34
21	13.36	3.92E+07	0.1	$\beta$ -Thujone	28
22	13.74	9.34E+07	0.2	$\beta$ -Fenchol	28
23	14.40	4.24E+07	0.1	Trans-Pinocarveol	28
24	14.58	1.18E+08	0.2	Camphor	71
25	14.84	2.73E+07	0.0	Camphene Hydrate	81
26	15.33	2.39E+08	0.4	Isoborneol	60
27	15.59	1.48E+08	0.3	4-Terpineol	61
28	16.01	5.07E+08	0.9	$\alpha$ -Terpineol	80
29	17.70	6.06E+07	0.1	Piperitone	76
30	18.56	5.14E+09	8.8	Bornyl Acetate	28
31	22.21	1.51E+08	0.3	$\beta$ -Caryophyllene	62
32	23.11	3.61E+07	0.1	$\beta$ -Humulene	26
33	24.13	1.60E+08	0.3	$\beta$ -Bisabolene	61

Table 1 – Composition de l'huile essentielle de Camomille Romaine (CMARB195022)

N°	Retention Time (min.)	Area	% of Total	Identification (NIST 08/MassFinder)
1	6.49	9.61E+08	1.7	Santene
2	7.67	4.28E+08	0.7	Tricyclene
3	7.78	9.94E+07	0.2	$\alpha$ -Thujene
4	8.00	8.09E+09	13.9	$\alpha$ -Pinene
5	8.50	3.31E+09	5.7	Camphene
6	9.15	3.39E+07	0.1	o-Cymene
7	9.21	3.27E+07	0.1	Sabinene
8	9.37	1.92E+10	32.9	$\beta$ -Pinene
9	9.72	8.37E+08	1.4	Myrcene
10	10.24	6.91E+07	0.1	$\alpha$ -Phellandrene
11	10.34	9.13E+09	15.7	$\delta$ 3-Carene
12	10.58	3.83E+07	0.1	$\delta$ 2-Carene
13	10.81	1.79E+08	0.3	p-Cymene
14	10.98	4.91E+09	8.4	Limonene
15	11.02	3.26E+09	5.6	$\beta$ -Phellandrene
16	11.87	1.27E+08	0.2	(Z)/(E)- $\beta$ -Ocimene
17	12.72	5.53E+08	0.9	Dehydrosabinaketone
18	12.81	1.51E+08	0.3	Fenchone
19	13.05	3.86E+07	0.1	$\alpha$ -Campholenal
20	13.14	6.21E+07	0.1	Linalool
21	13.36	3.92E+07	0.1	$\beta$ -Thujone
22	13.74	9.34E+07	0.2	$\beta$ -Fenchol
23	14.40	4.24E+07	0.1	Trans-Pinocarveol
24	14.58	1.18E+08	0.2	Camphor
25	14.84	2.73E+07	0.0	Camphene Hydrate
26	15.33	2.39E+08	0.4	Isoborneol
27	15.59	1.48E+08	0.3	4-Terpineol
28	16.01	5.07E+08	0.9	$\alpha$ -Terpineol
29	17.70	6.06E+07	0.1	Piperitone
30	18.56	5.14E+09	8.8	Bornyl Acetate
31	22.21	1.51E+08	0.3	$\beta$ -Caryophyllene
32	23.11	3.61E+07	0.1	$\beta$ -Humulene
33	24.13	1.60E+08	0.3	$\beta$ -Bisabolene