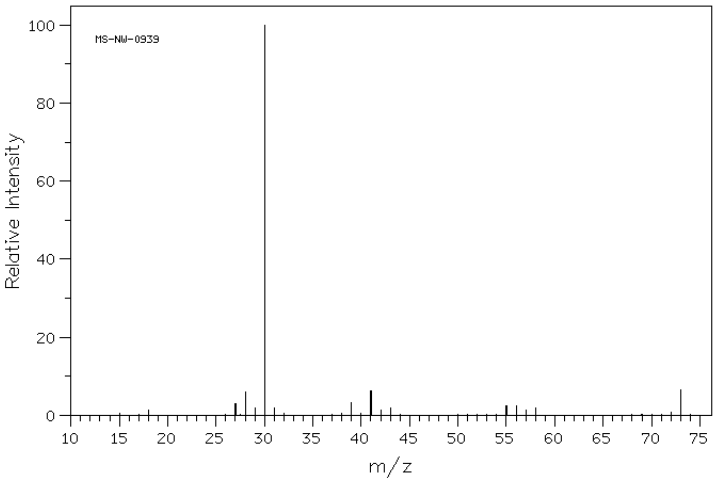
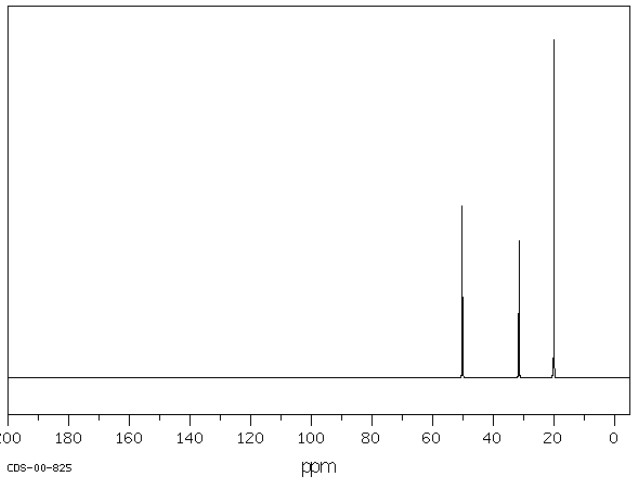
Pour s'entrainer…

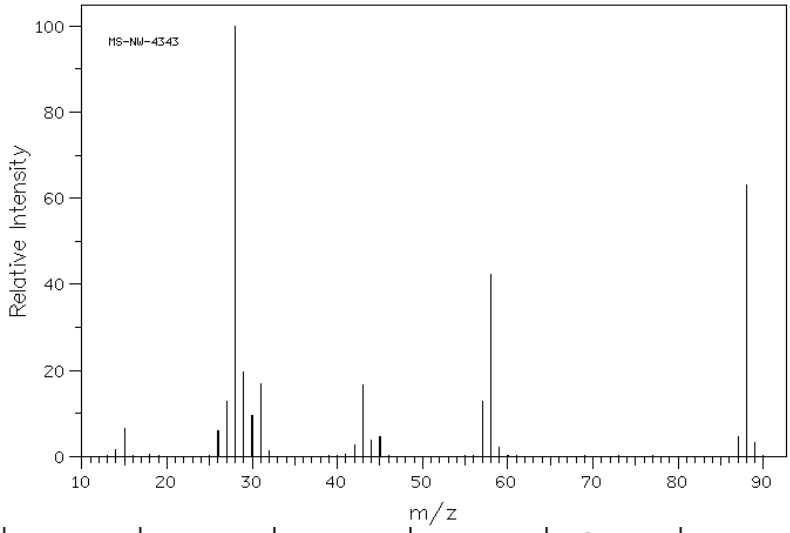
Sauf indication contraire, les spectres RMN sont réalisés en solution dans $CDCl_3$ à 400MHz en ^1H et 100MHz en ^{13}C pour les composés de A à O

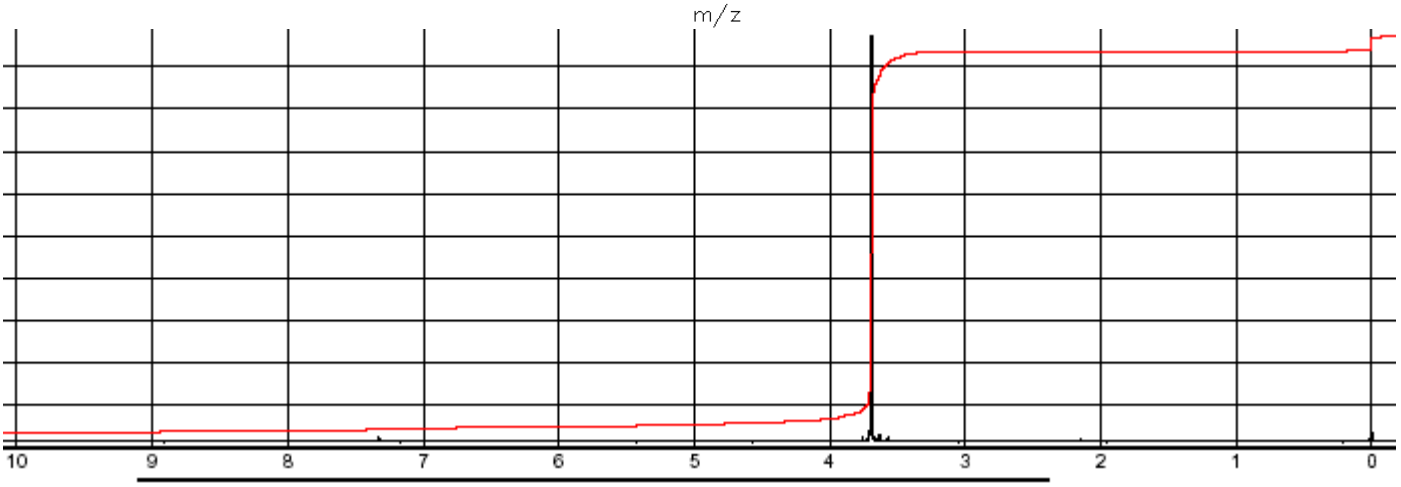
Composé A : $C_4H_{11}N$



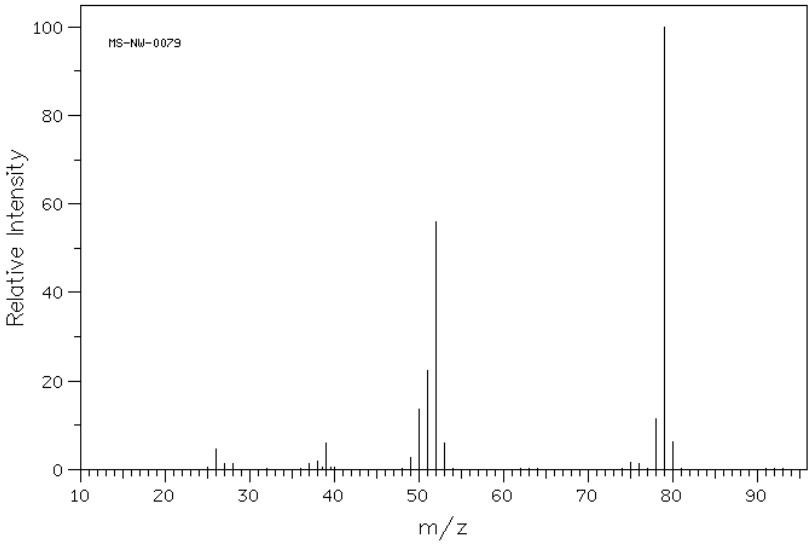


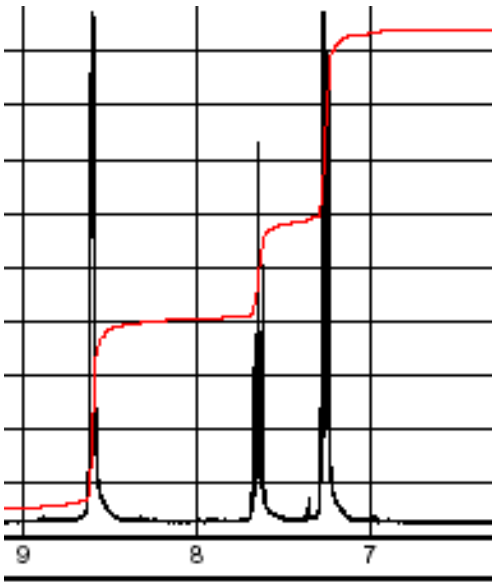
Composé B : $C_4H_8O_2$



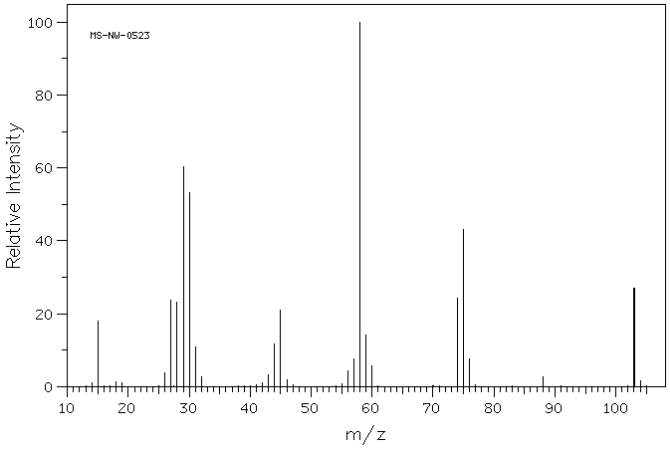


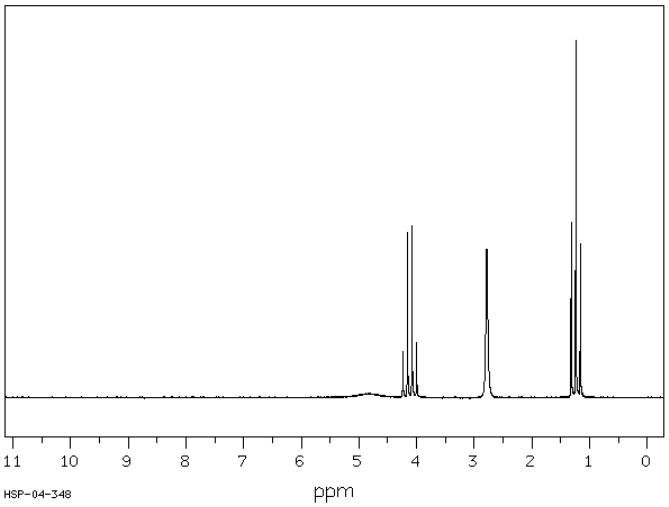
Composé C : C_5H_5N



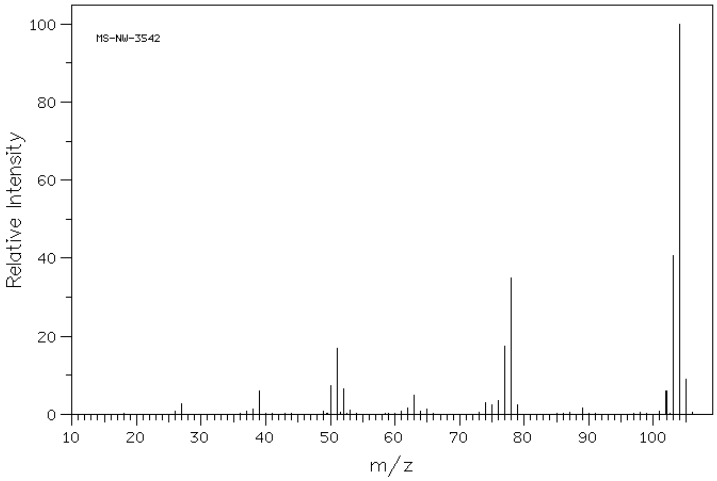


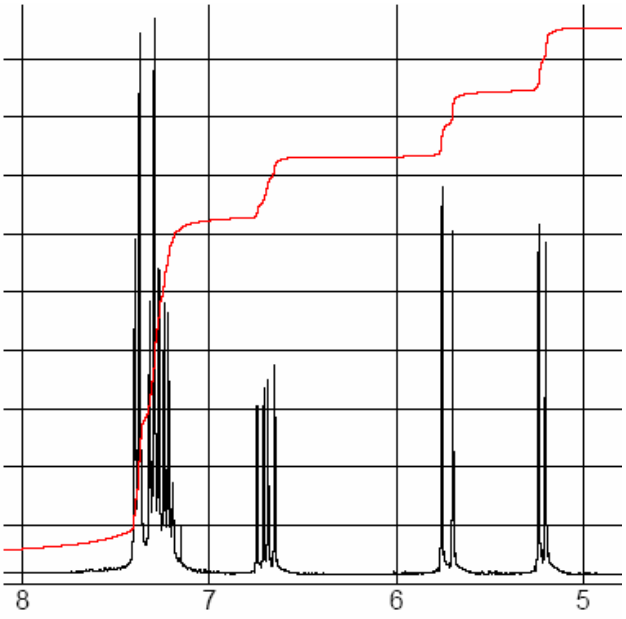
Composé D : $C_4H_9NO_2$



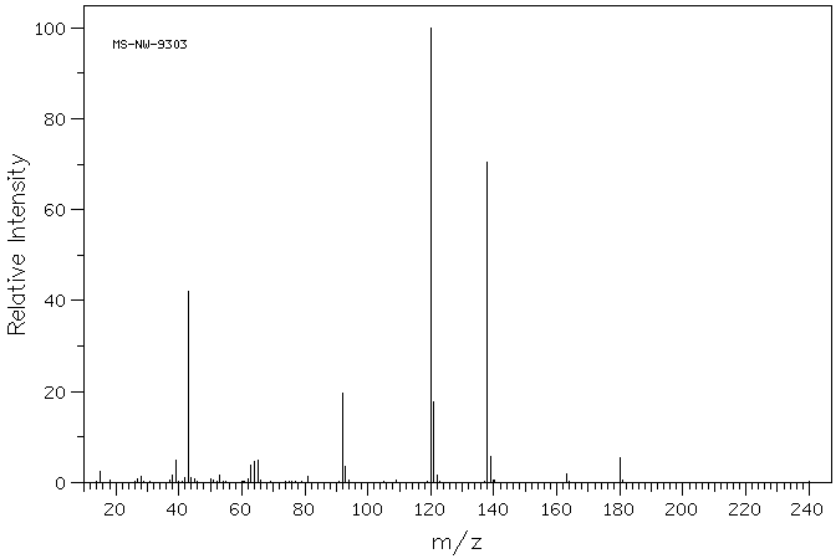


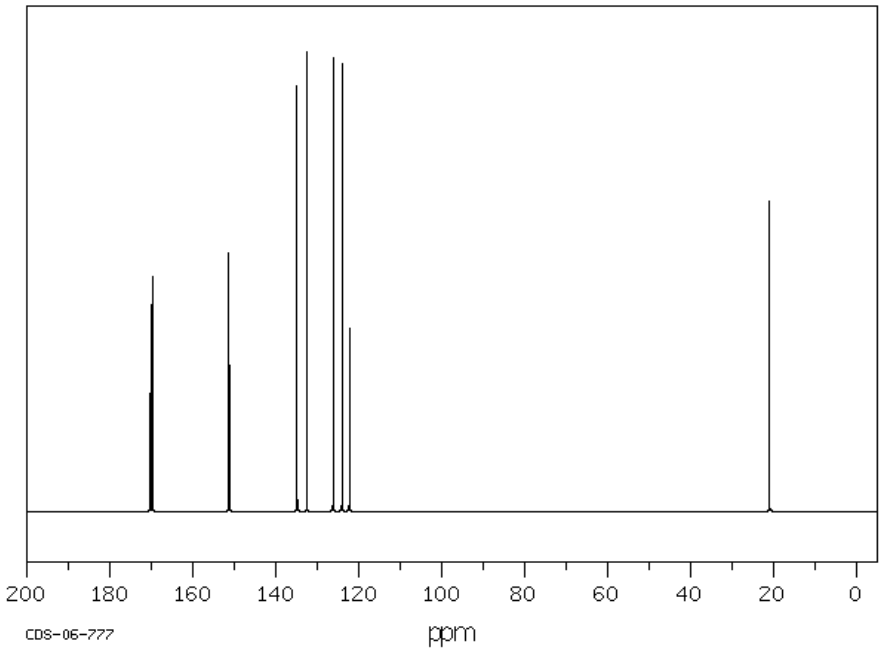
Composé E : C_8H_8

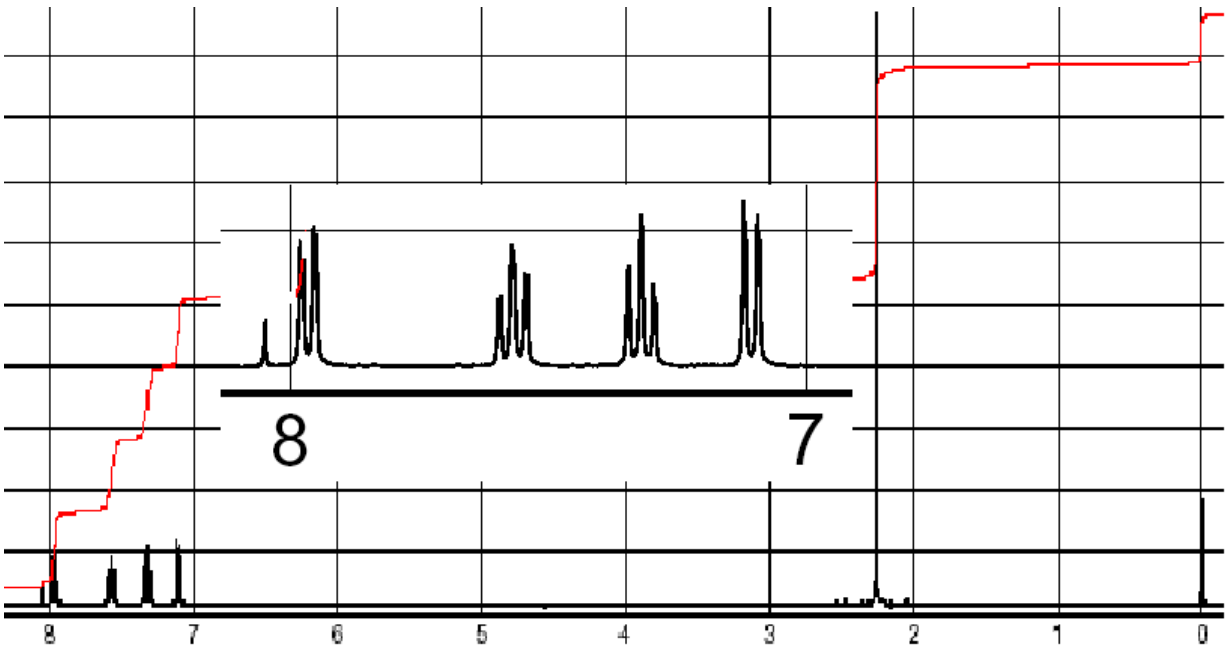




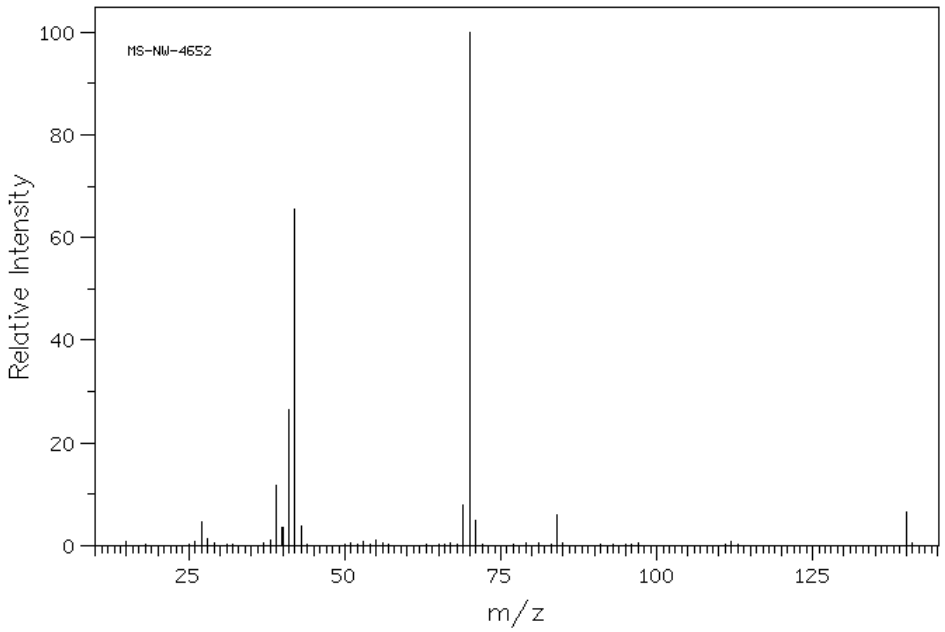
Composé F : $C_9H_8O_4$

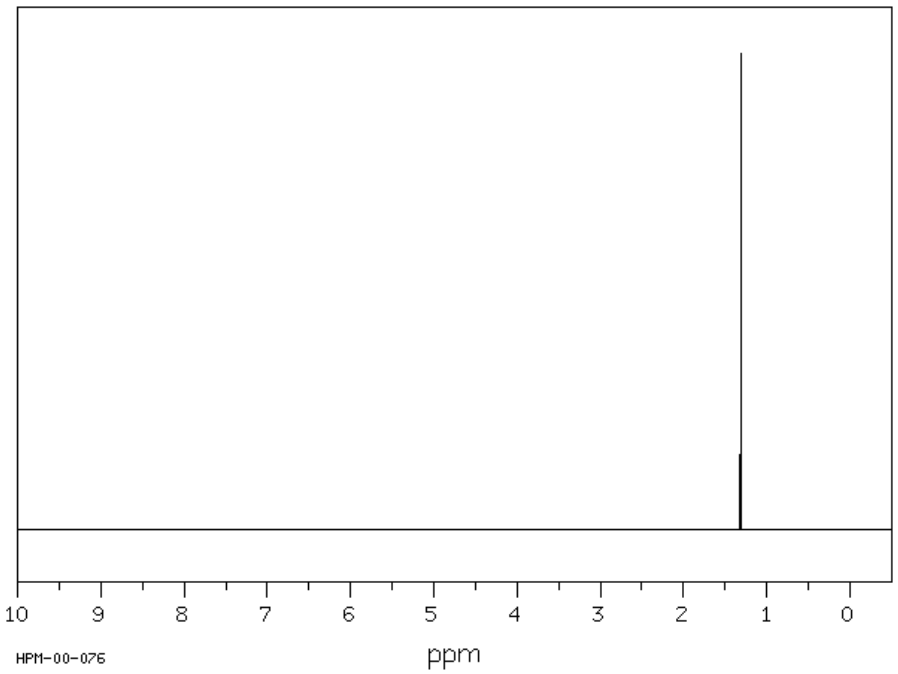


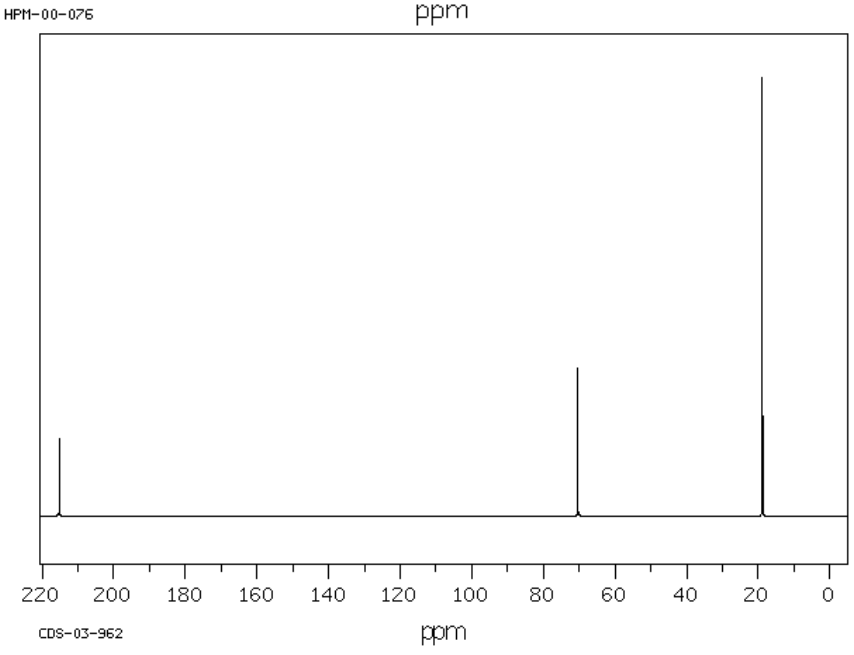




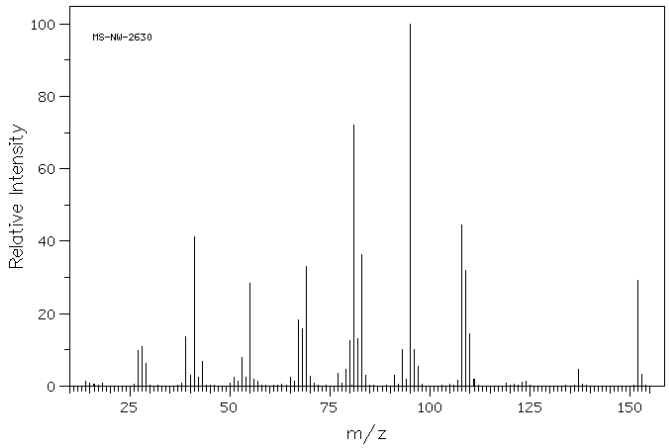
Composé G : $C_8H_{12}O_2$

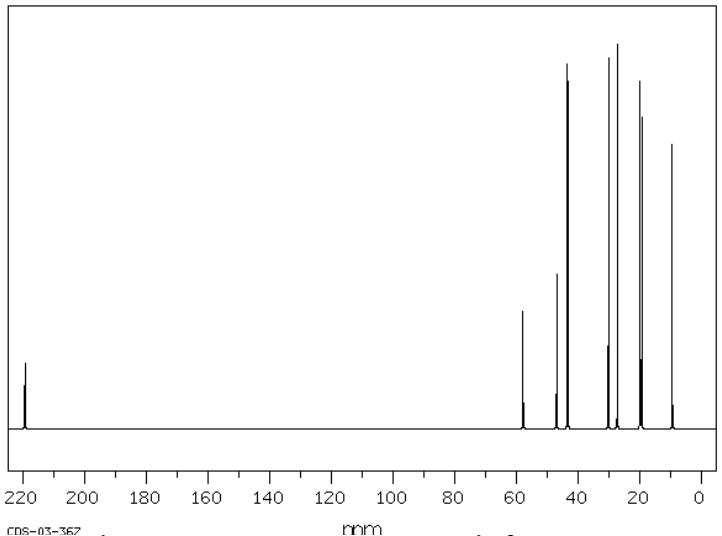


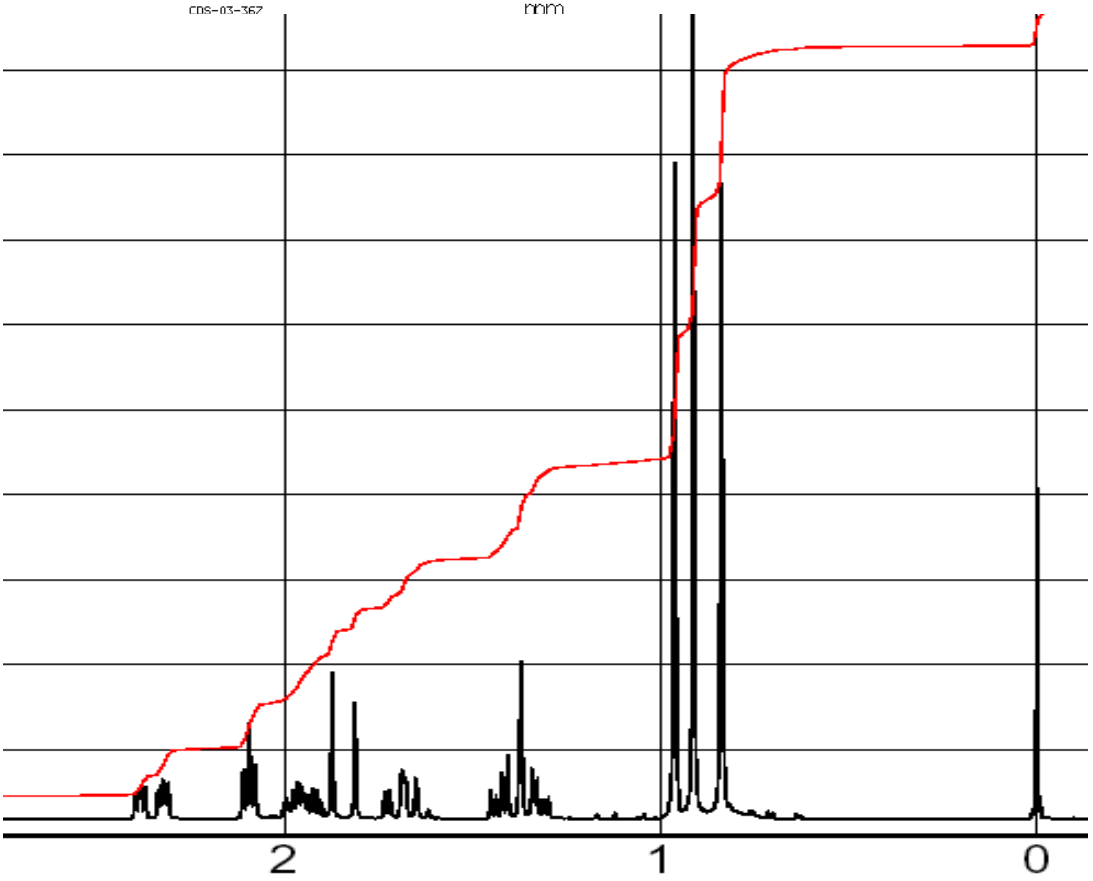




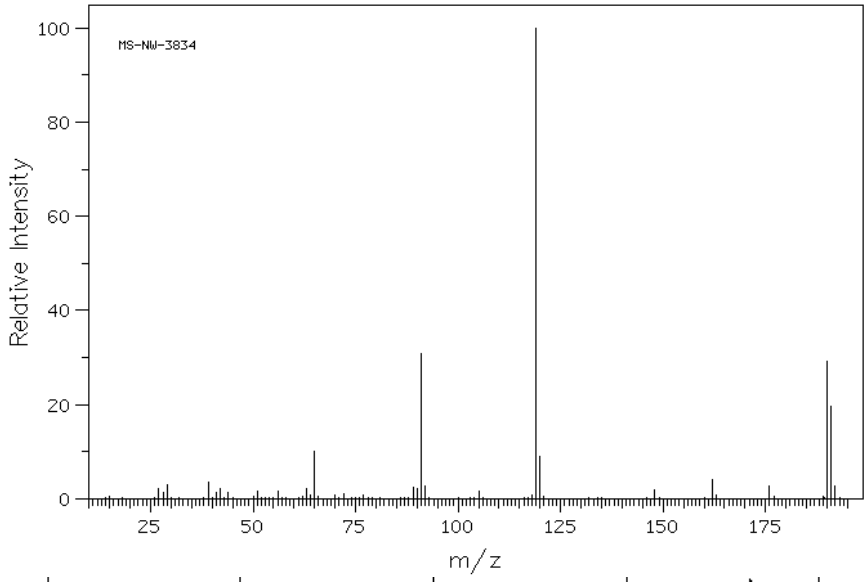
Composé H : $C_{10}H_{16}O$

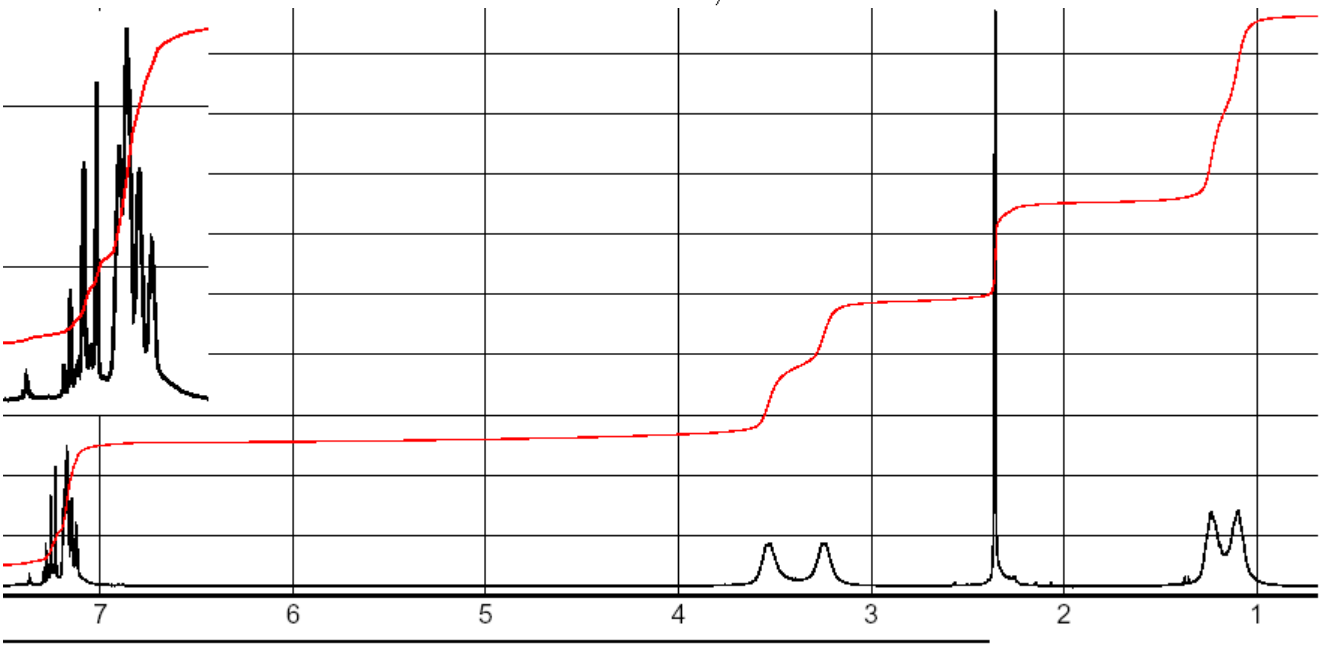


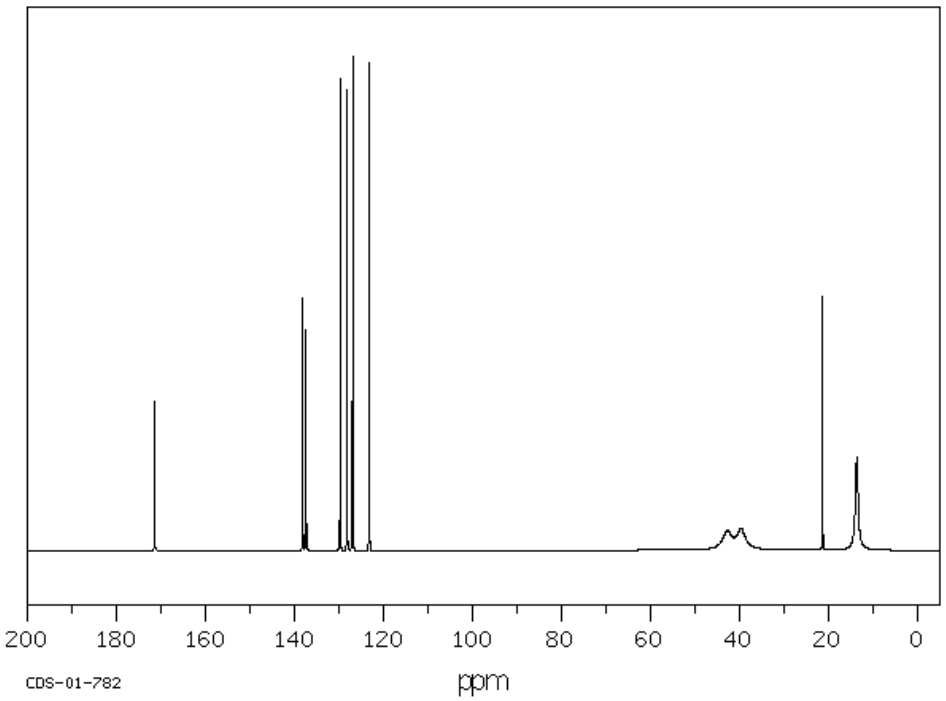




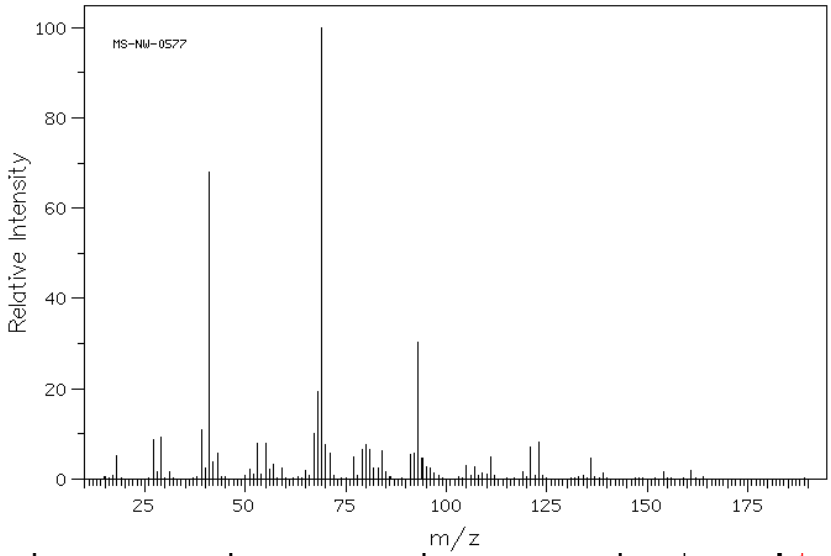
Composé I : $C_{12}H_{17}NO$

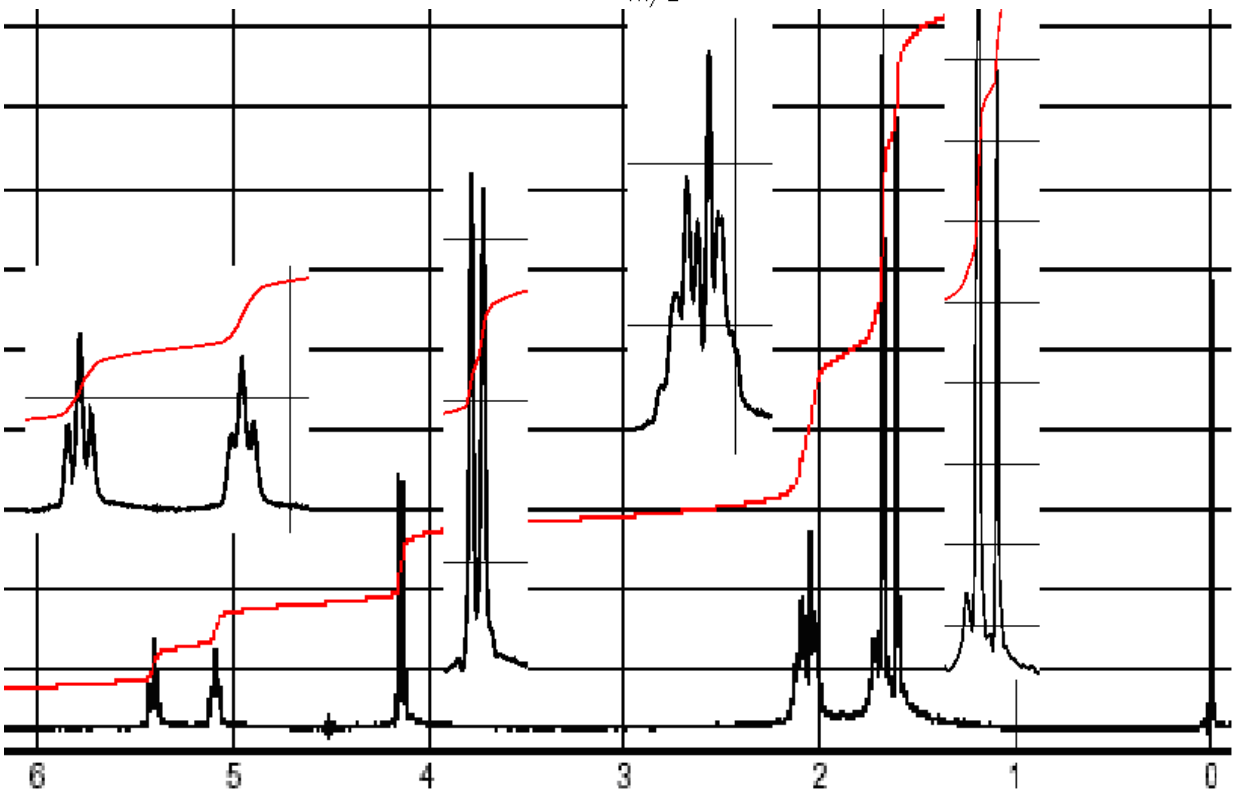


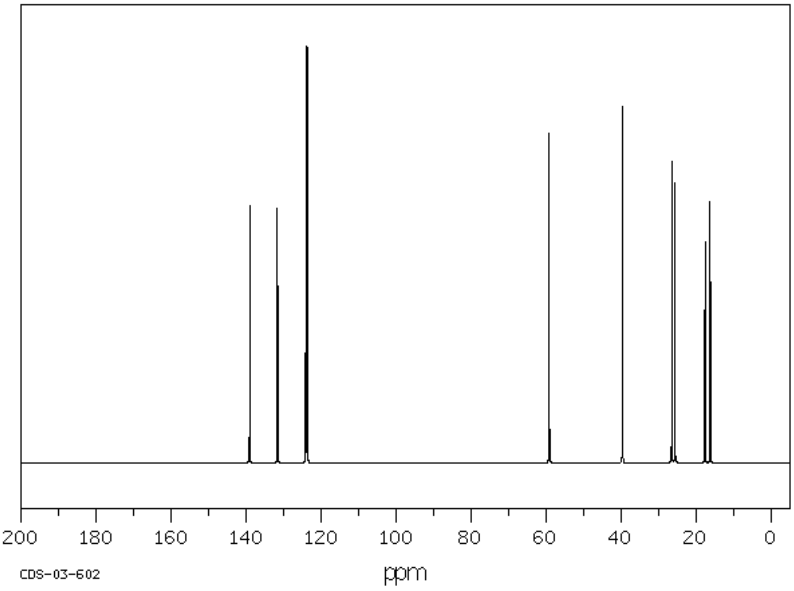




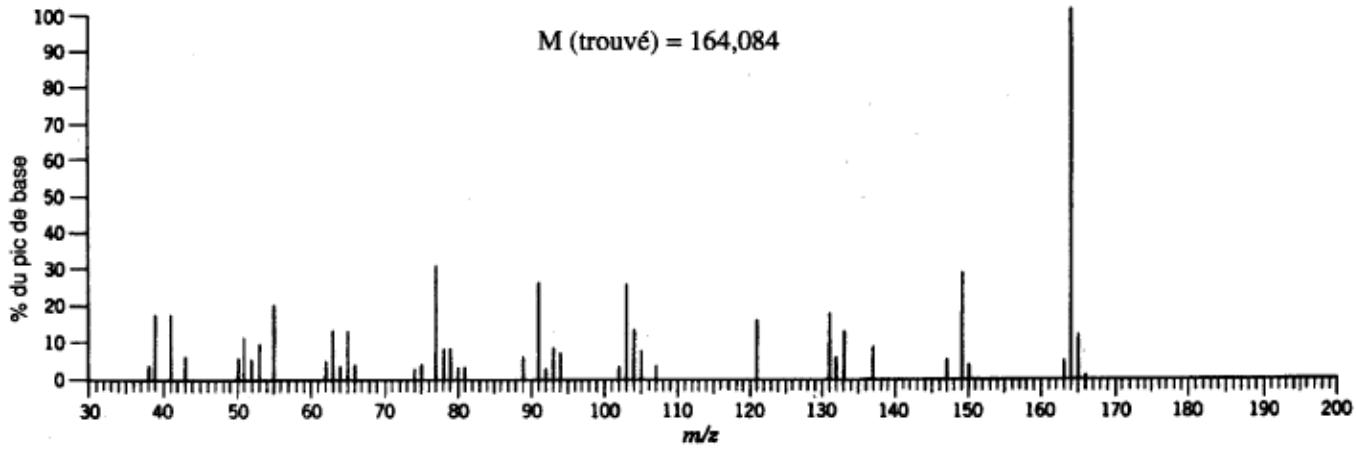
Composé J : $C_{10}H_{18}O$

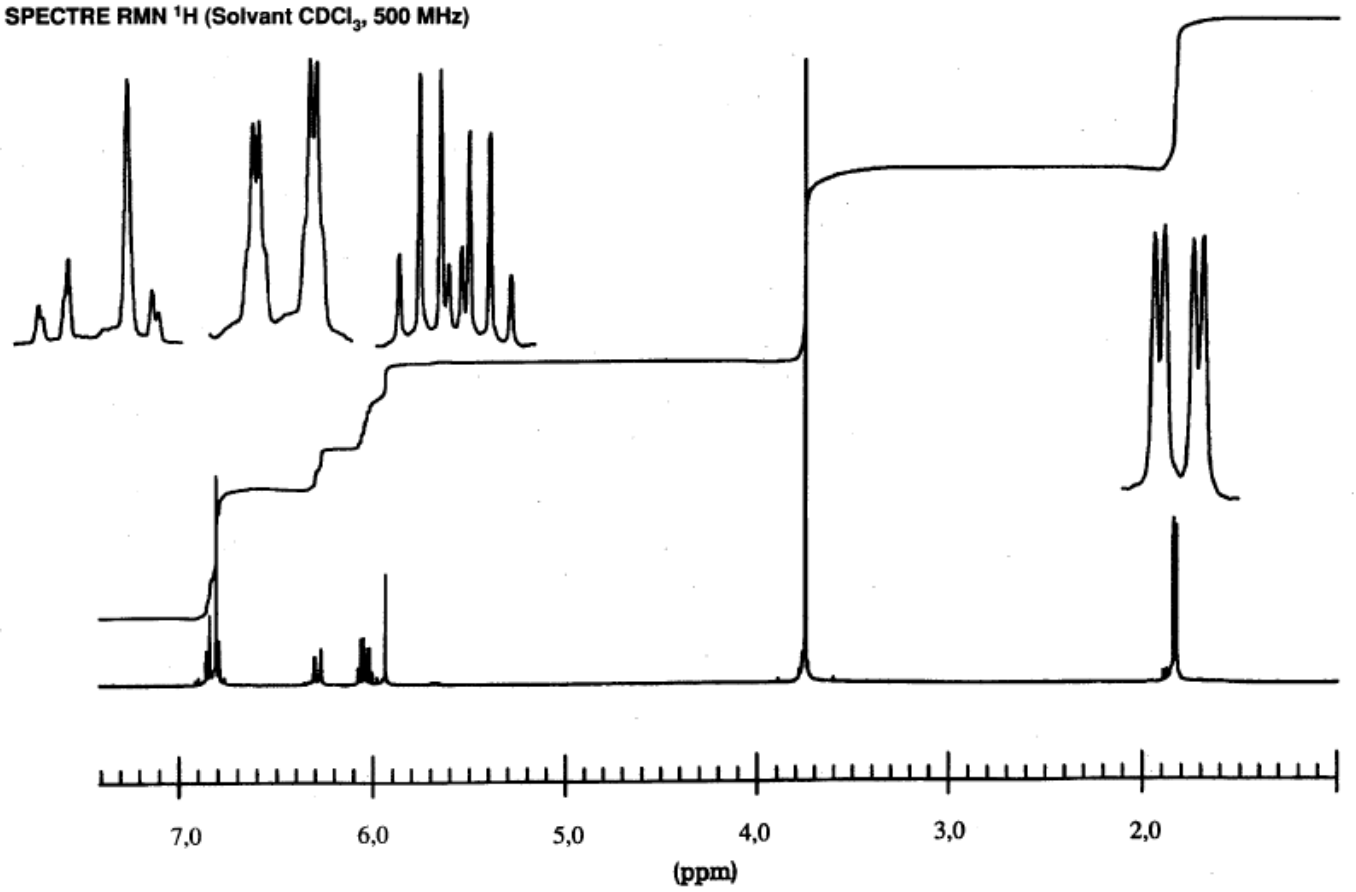




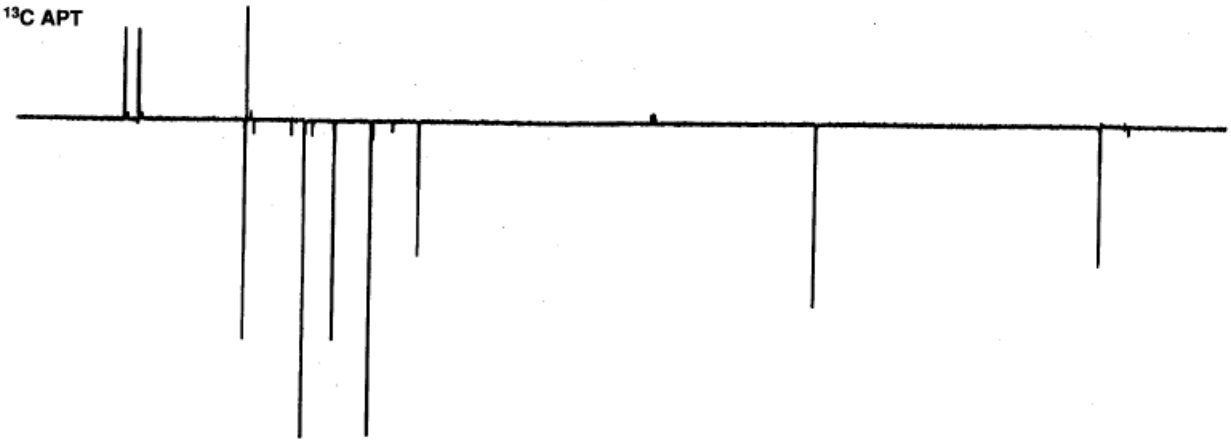


Composé K : $C_{10}H_{12}O_2$

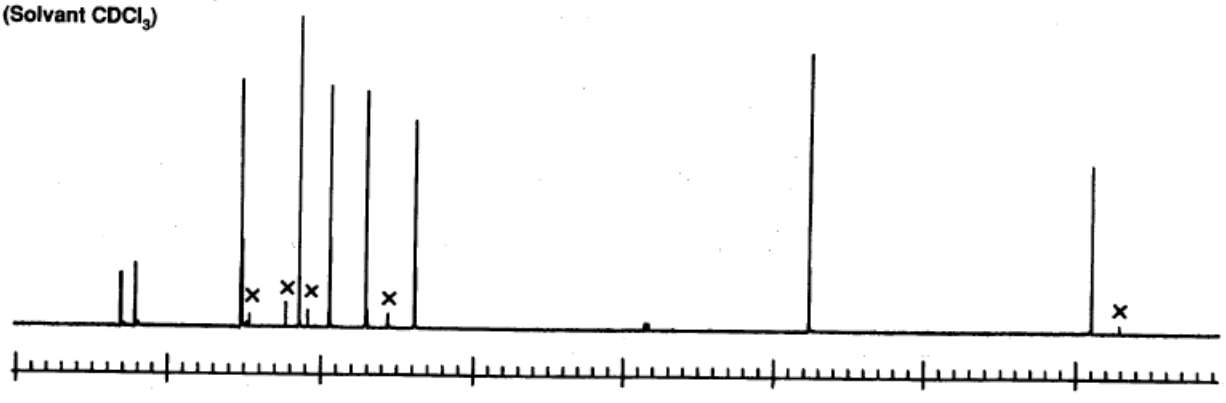




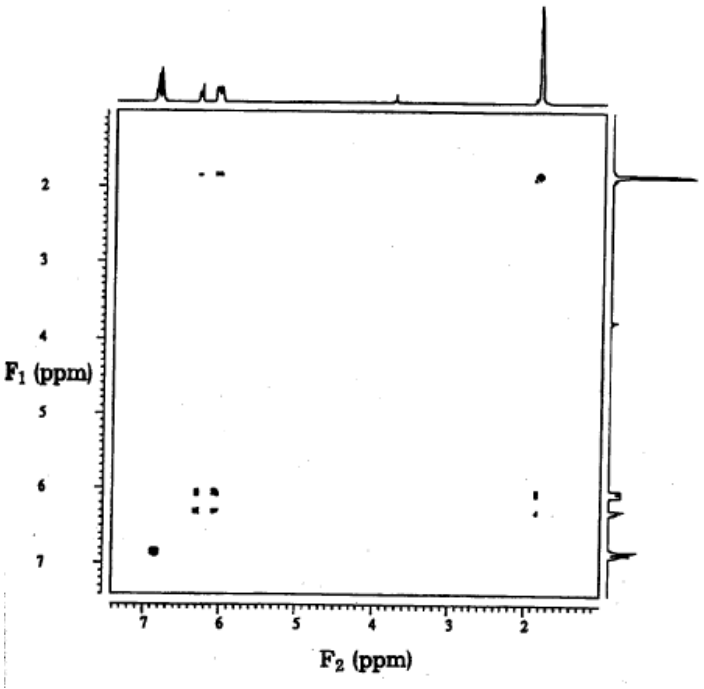
^{13}C APT



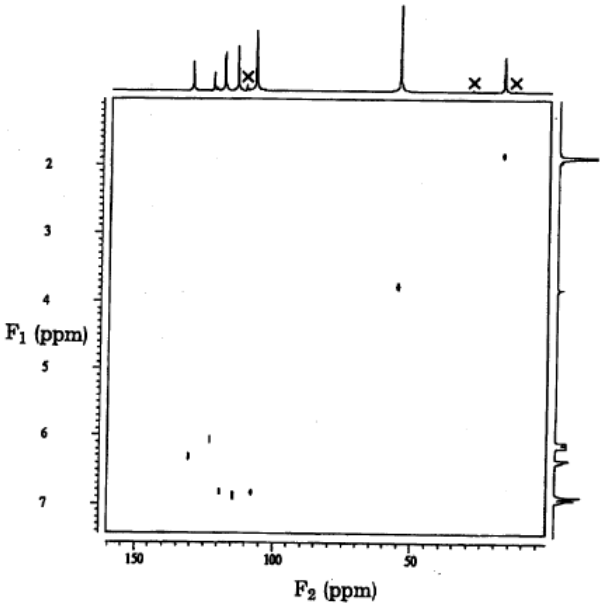
SPECTRE RMN ^{13}C
(Solvant $CDCl_3$)



HH COSY



HC COSY (HETCOR)



Composé L : $C_8H_{16}O$

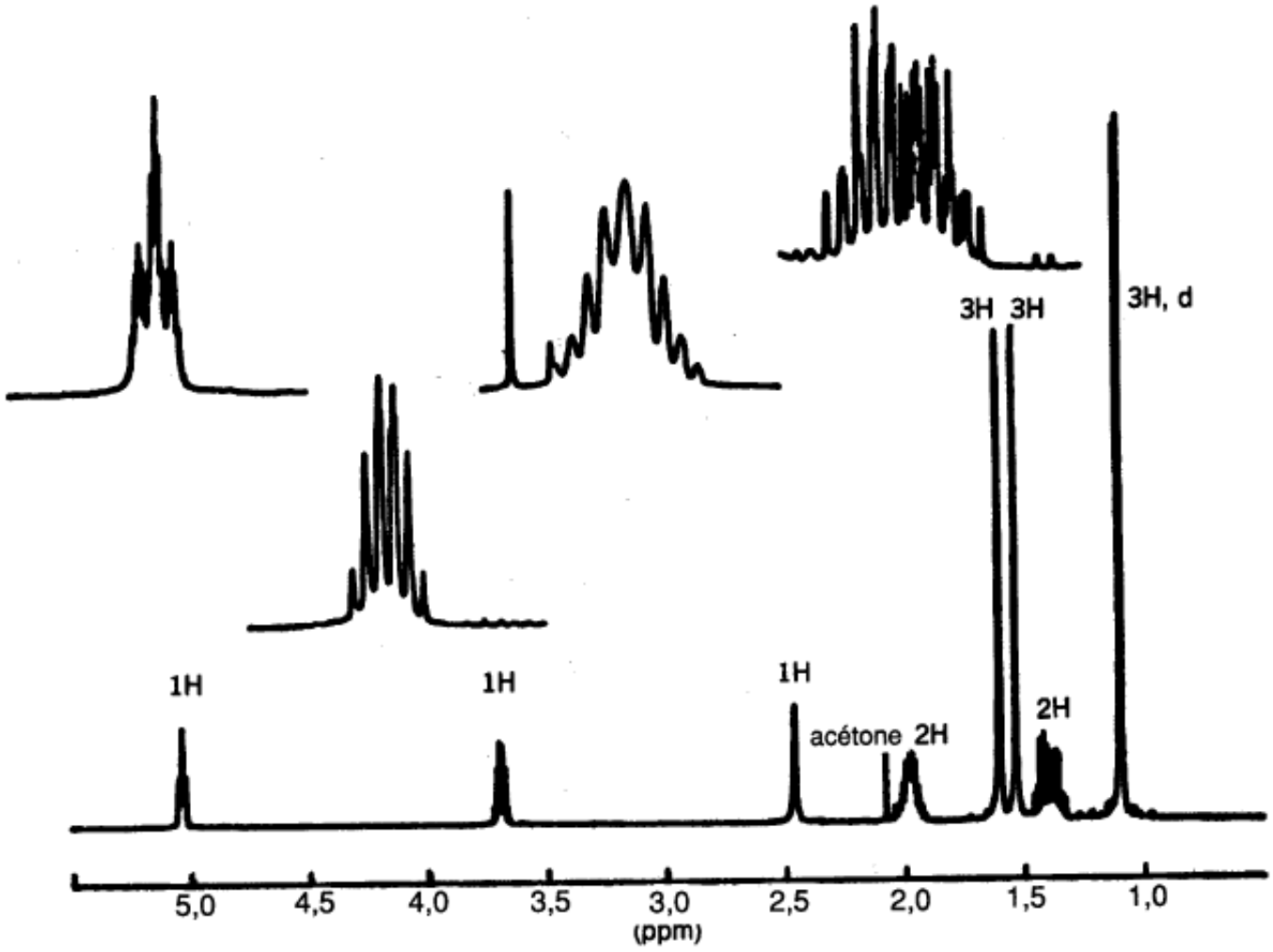
DONNÉES SUR LE SPECTRE DE MASSE

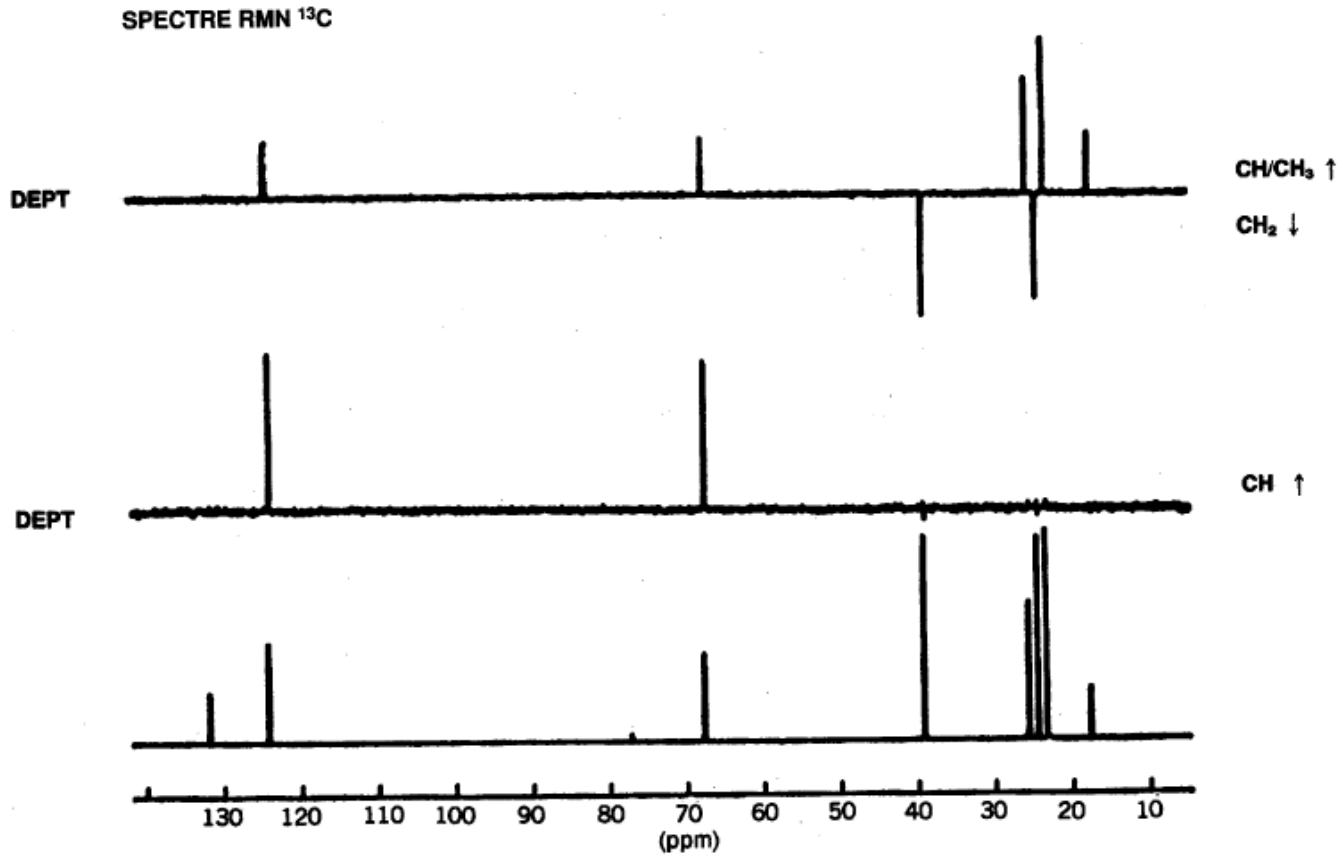
M (trouvé) = 128,1203

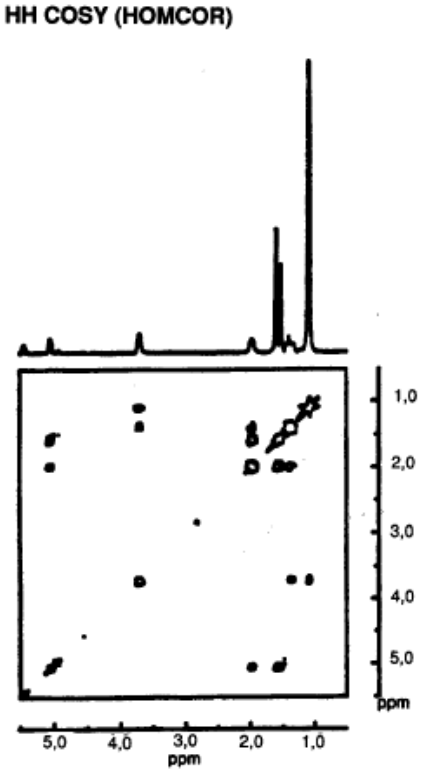
Présence de pics à *m/z* 128, 113, 110 et 95 (pic de base)

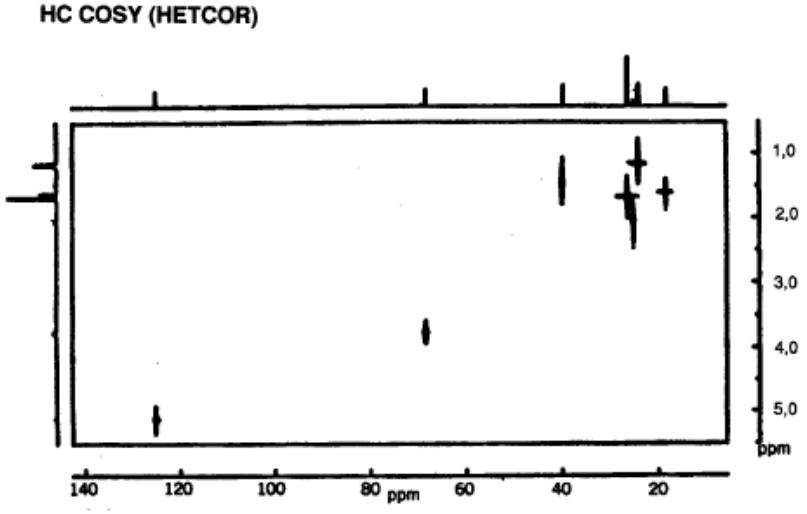
SPECTRE RMN ^1H (Solvant $CDCl_3$, 500 MHz)

Le pic à δ 2,45 disparaît après agitation de la solution en présence de D_2O



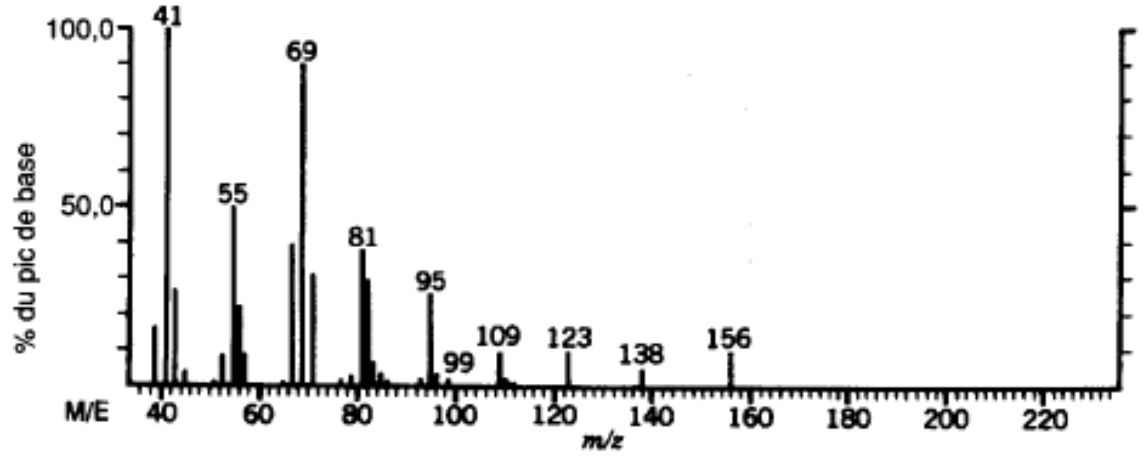

SPECTRE RMN ^{13}C
DEPT
CH/CH₃ ↑
CH₂ ↓
DEPT
CH ↑
130 120 110 100 90 80 70 60 50 40 30 20 10
(ppm)


HH COSY (HOMCOR)
1,0
2,0
3,0
4,0
5,0
ppm
5,0 4,0 3,0 2,0 1,0
ppm

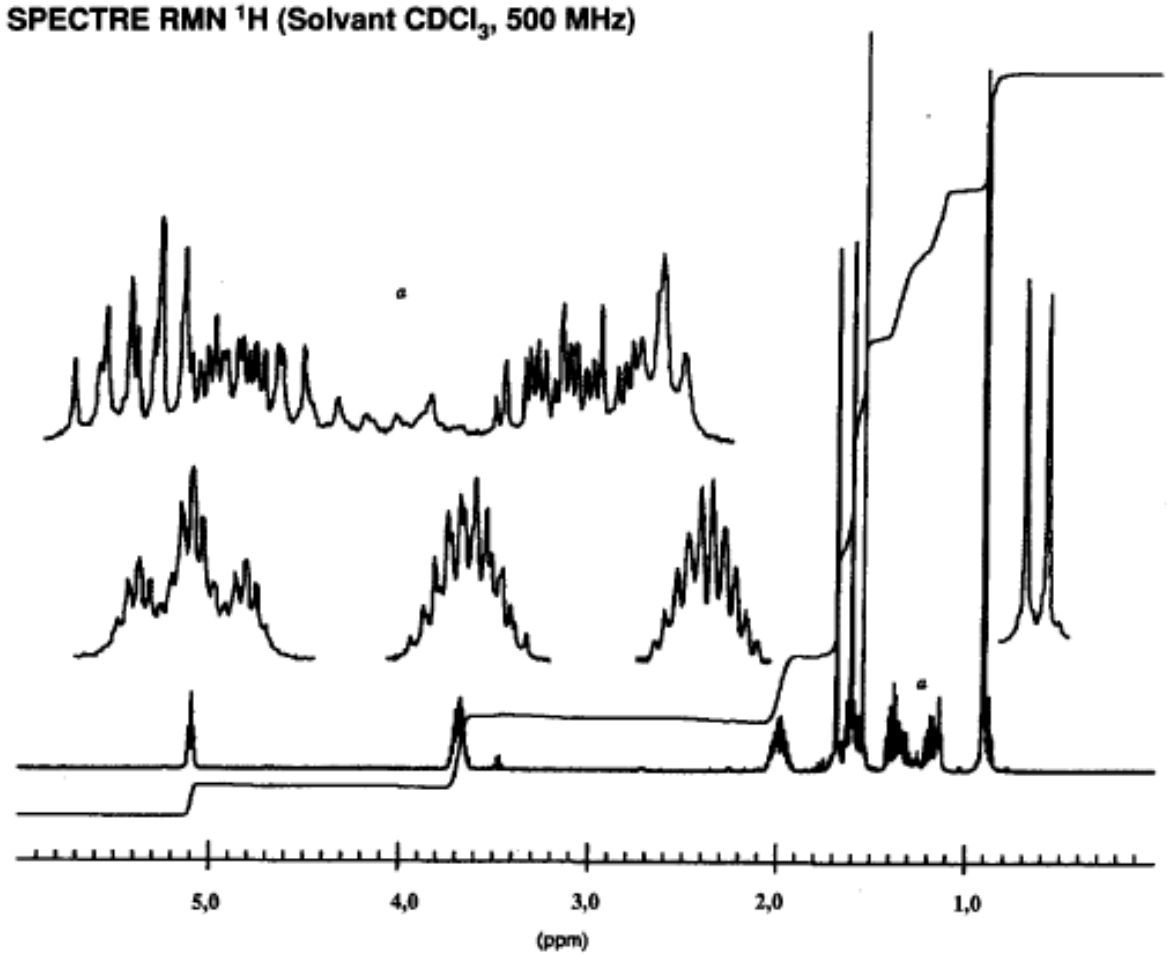

HC COSY (HETCOR)
1,0
2,0
3,0
4,0
5,0
ppm
140 120 100 80 ppm 60 40 20

Composé M : $C_{10}H_{20}O$

SPECTRE DE MASSE (Intensités relatives) M (trouvé) = 156,1513

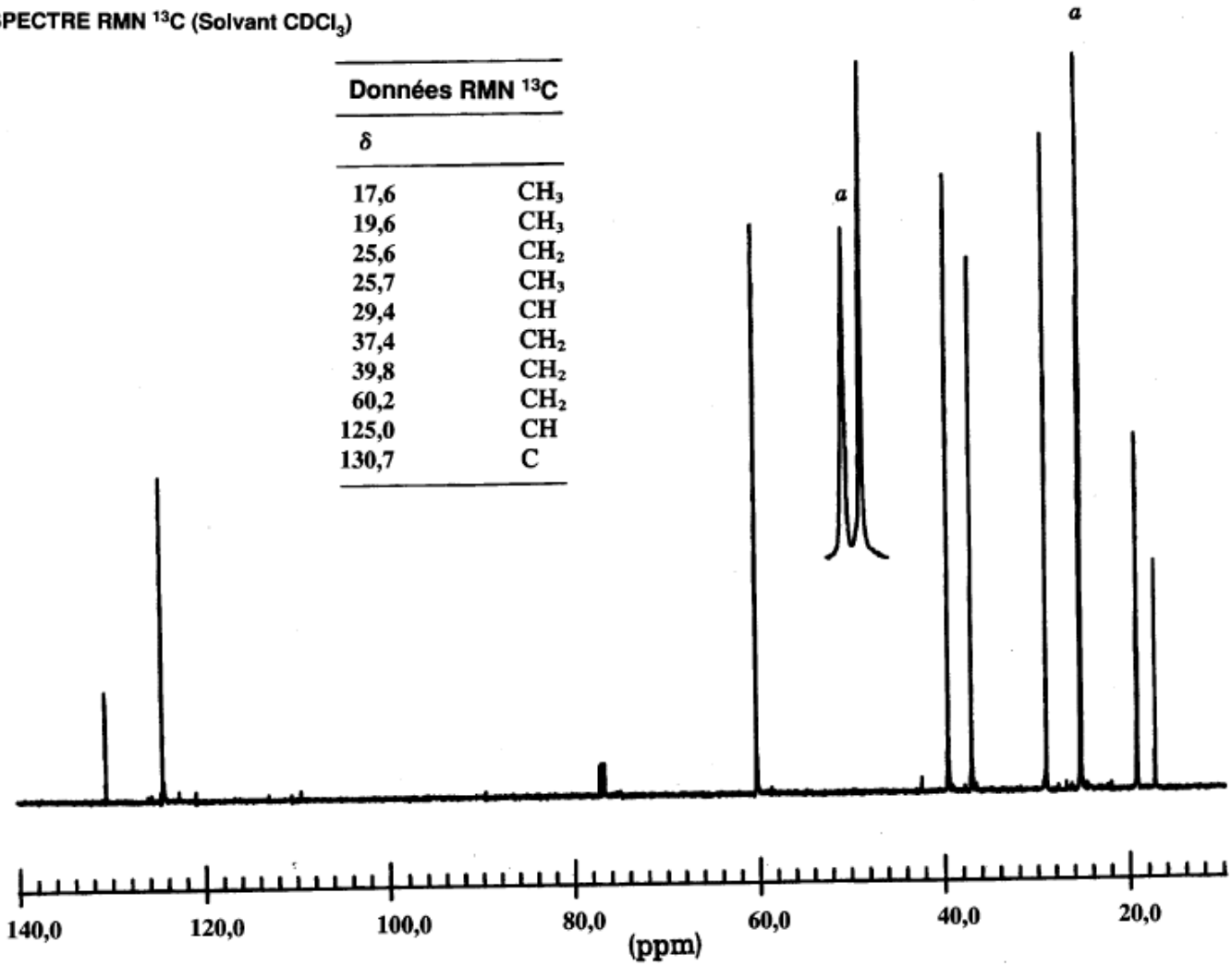


SPECTRE RMN ^1H (Solvant $CDCl_3$, 500 MHz)

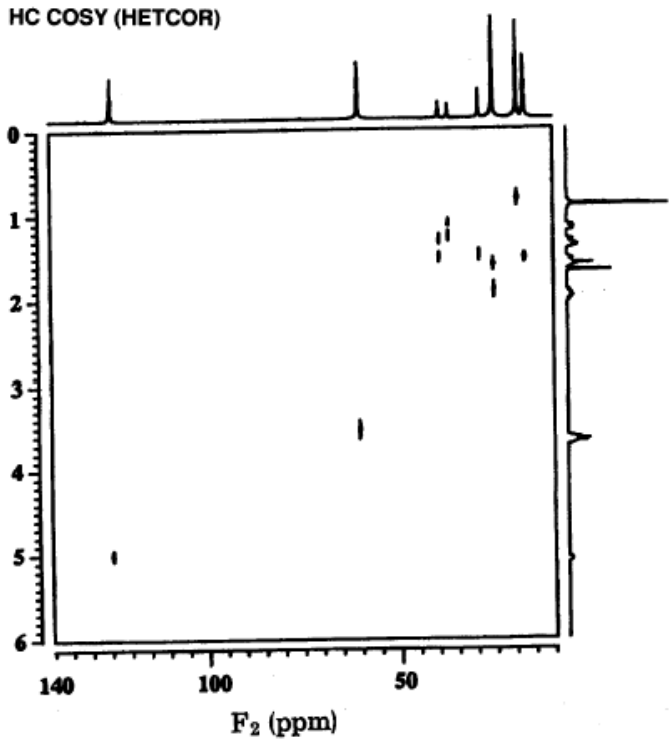


SPECTRE RMN ^{13}C (Solvant $CDCl_3$)

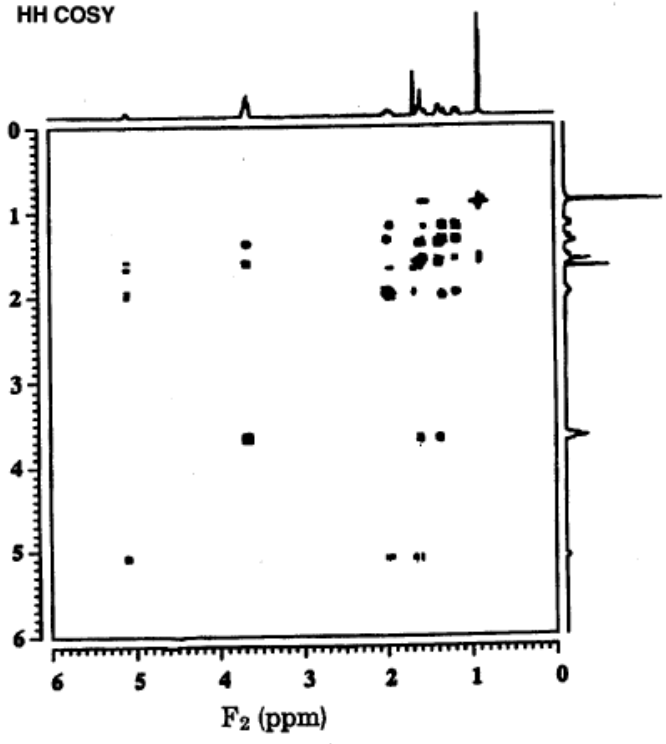
Données RMN ^{13}C	
δ	
17,6	CH_3
19,6	CH_3
25,6	CH_2
25,7	CH_3
29,4	CH
37,4	CH_2
39,8	CH_2
60,2	CH_2
125,0	CH
130,7	C



HC COSY (HETCOR)

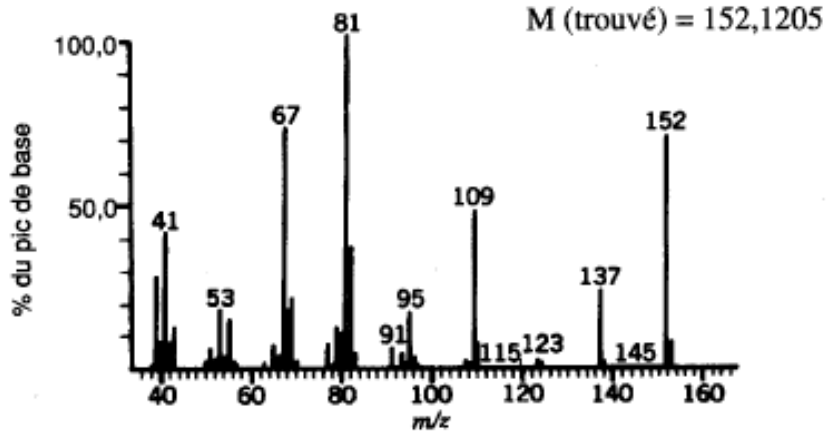


HH COSY

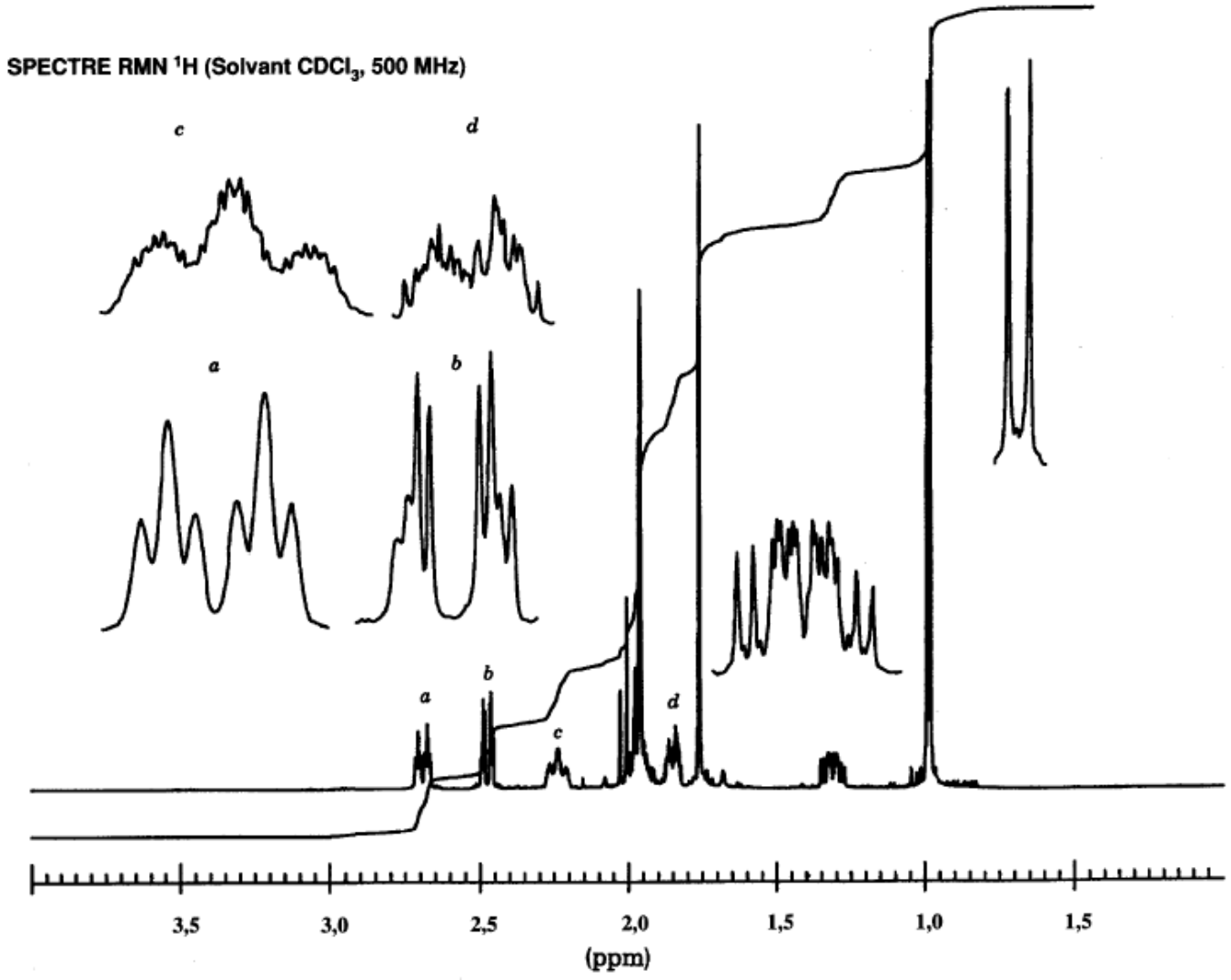


Composé N : $C_{10}H_{16}O$

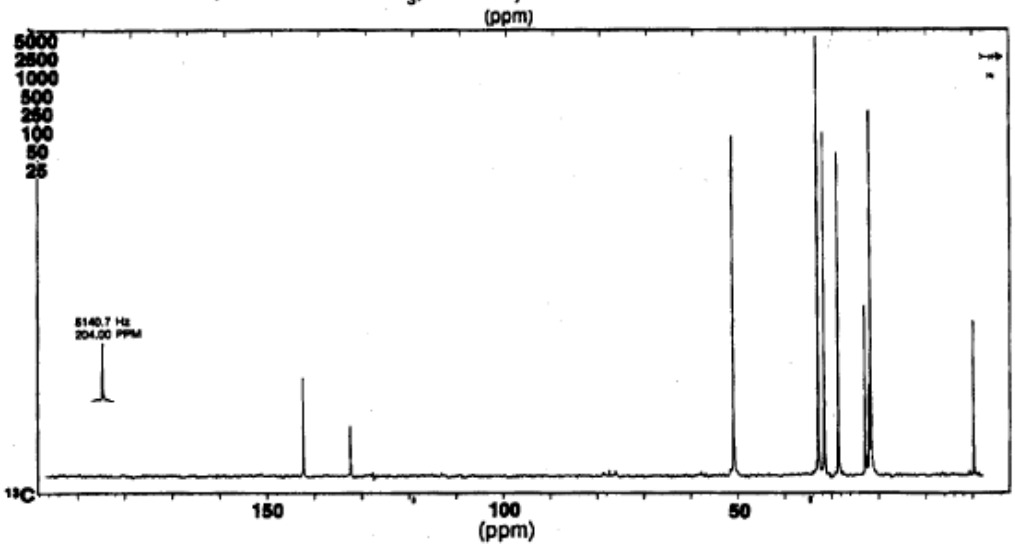
SPECTRE DE MASSE (Intensités relatives)



SPECTRE RMN ^1H (Solvant $CDCl_3$, 500 MHz)

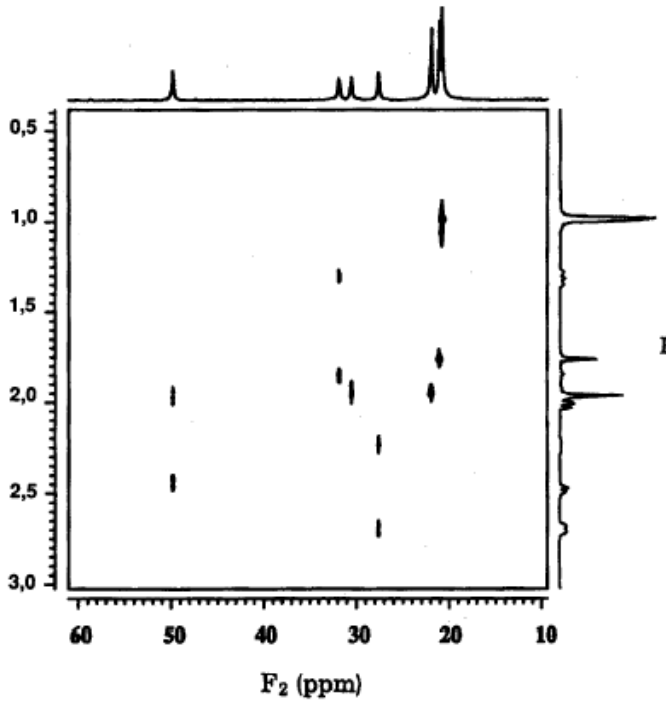


SPECTRE RMN ^{13}C (SOLVANT $CDCL_3$, 25 MHZ)

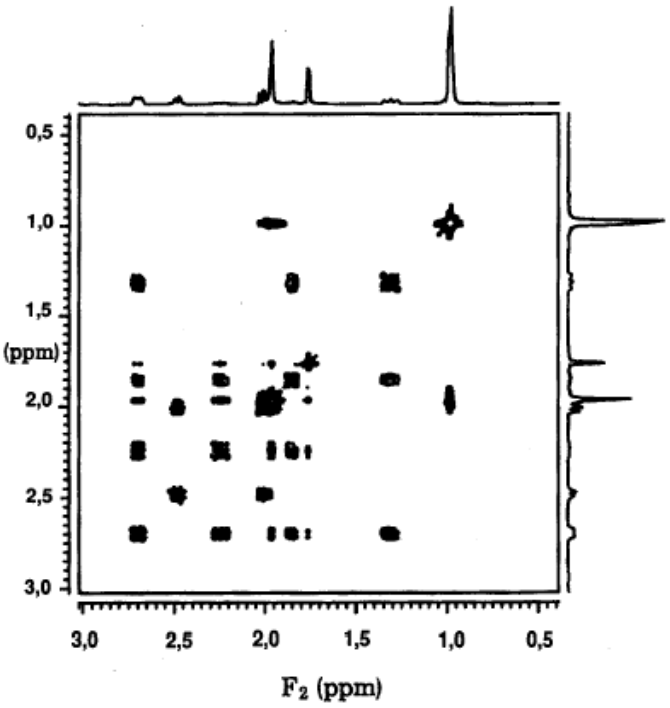


Données RMN ^{13}C	
δ	
21,7	CH_3
21,8	CH_3
22,7	CH_3
28,5	CH_2
31,4	CH
32,9	CH_2
50,7	CH_2
131,7	C
140,8	C
204,0	C

HC COSY (HETCOR)

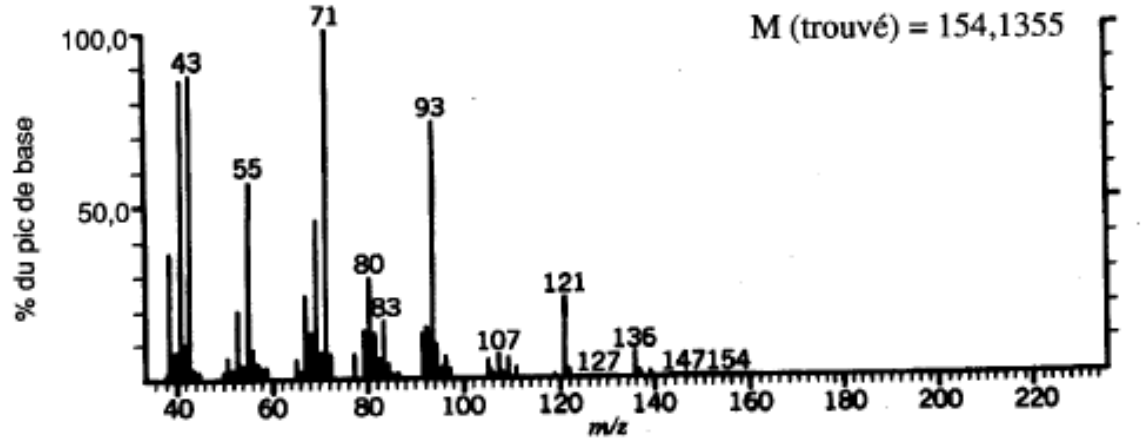


HH COSY



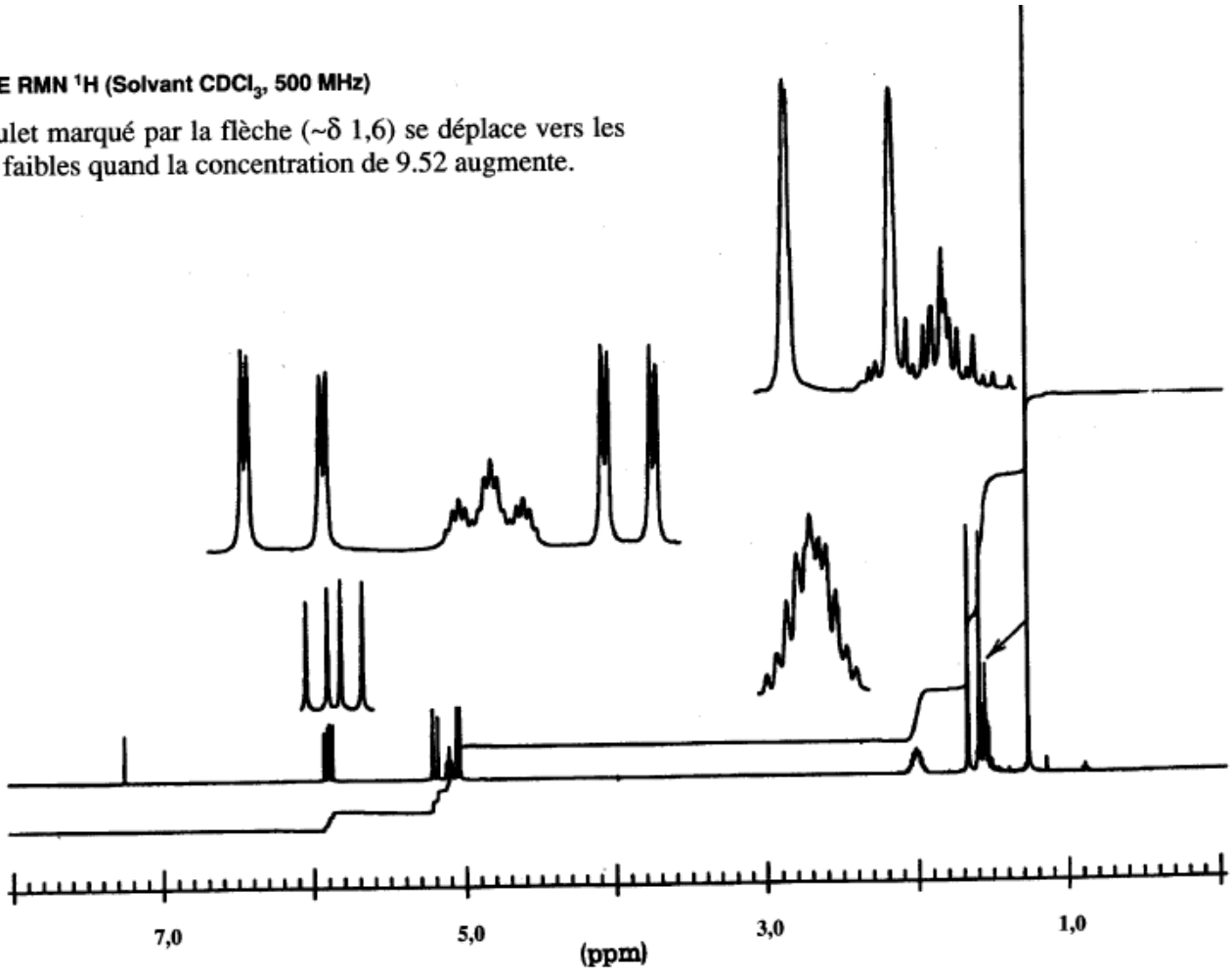
Composé O : $C_{10}H_{18}O$

SPECTRE DE MASSE (Intensités relatives)

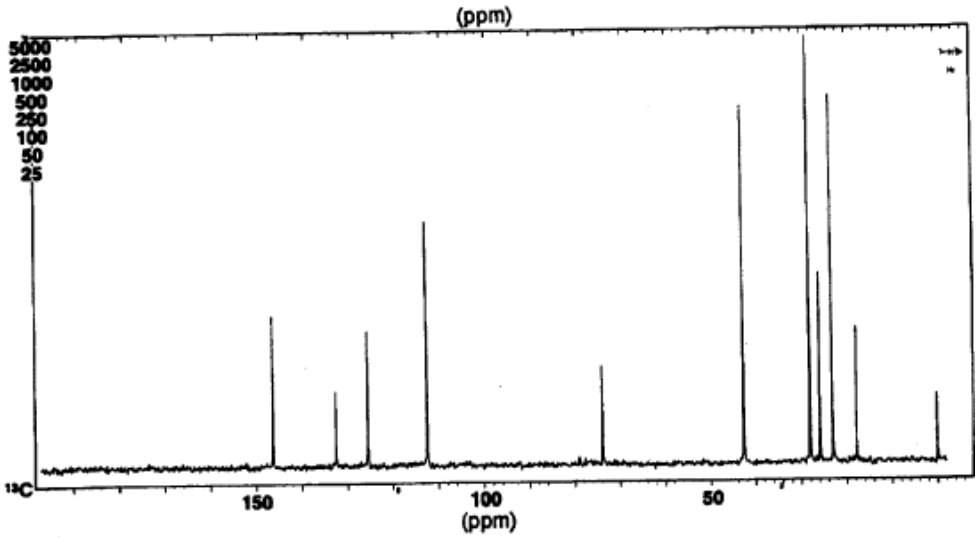


SPECTRE RMN ^1H (Solvant $CDCl_3$, 500 MHz)

Le singulet marqué par la flèche (~δ 1,6) se déplace vers les champs faibles quand la concentration de 9.52 augmente.

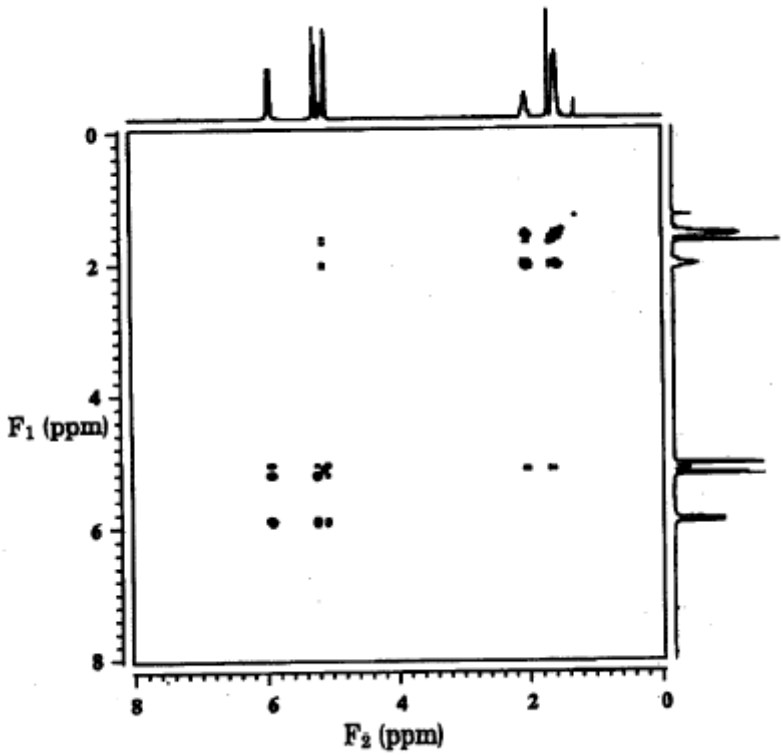


SPECTRE RMN ^{13}C (Solvant $CDCl_3$)

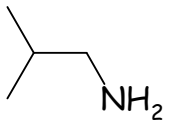


Données RMN ^{13}C	
δ	
17,5	CH_3
22,6	CH_2
25,3	CH_3
27,2	CH_3
41,2	CH_2
72,7	C
111,3	CH_2
124,6	CH
130,3	C
145,0	CH

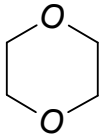
HH COSY



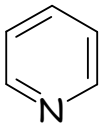
Formules développées



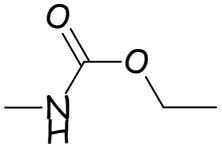
A : isobutylamine



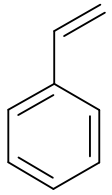
B : 1,4-dioxane



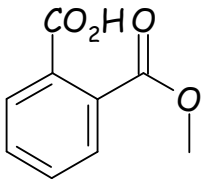
C : pyridine



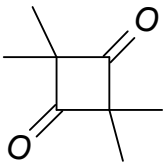
D : éthyl-N-méthylcarbamate



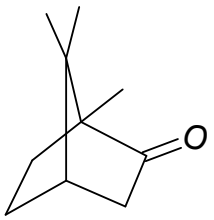
E : styrène



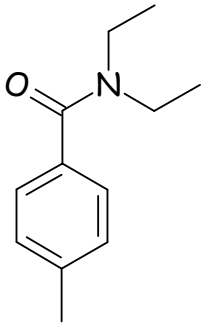
F : acide 2-acétoxy benzoique
aspirine



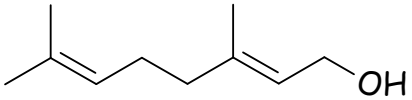
G : 2,2,4,4-tétraméthyl-1,3-cyclobutanedione



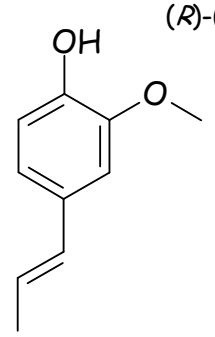
H : (1*R*)-1,7,7-triméthyl bicyclo[2.2.1]heptan-2-one
(*R*)-(+)-camphre



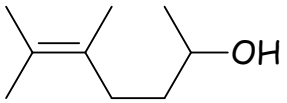
I : N,N-diéthyl-*m*-toluidine



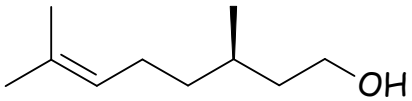
J : *trans*-3,7-diméthyl-2,6-octadien-1-ol
géraniol



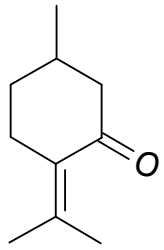
K : *trans*-2-méthoxy-4-propenylphénol
trans-isoeugenol



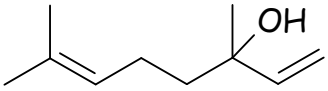
L : 6-méthyl-5-hepten-2-ol



M : (*S*)-3,7-diméthyl-6-octen-1-ol
(*S*)-(-)-β-citronellol



N : (S)-2-isopropyliden-5-méthyl cyclohexanone
(-)-pulegone



O : 3,7-diméthyl-1,6-octadien-3-ol
linalool