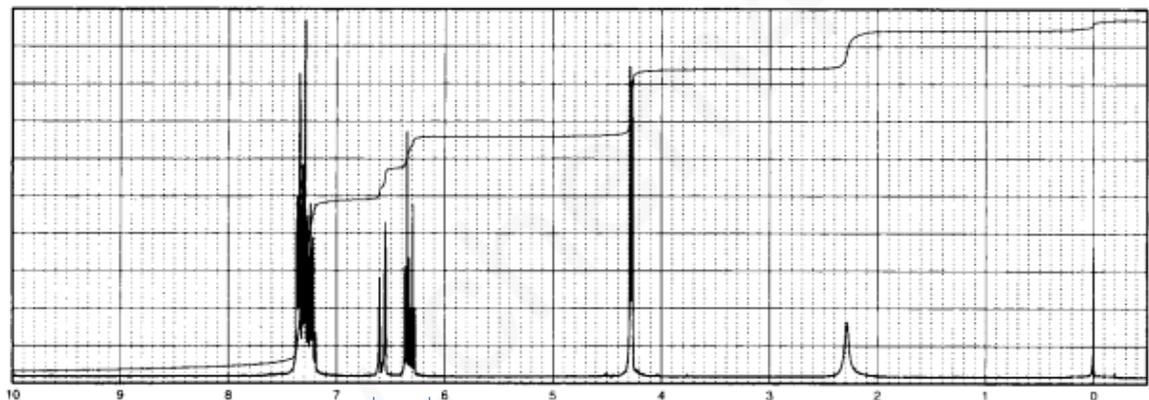


Problema 1

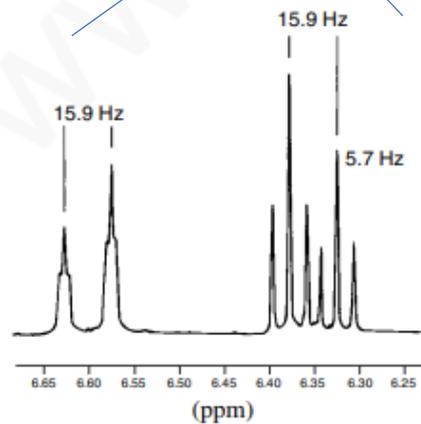
O composto de fórmula molecular  $C_9H_{10}O$  apresenta os espectros no IV e RMN de  $^1H$ .

A região de hidrogênios aromáticos perto de 7,4 ppm é muito complexa para interpretação, mas as integrações fornecem informações suficientes para a sua proposta.

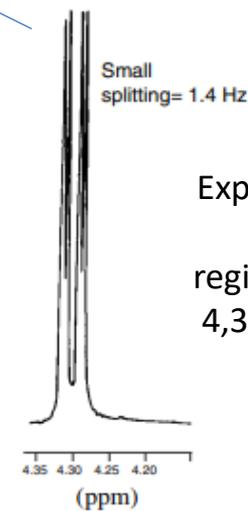
O pico largo em 2,3 ppm refere-se ao solvente utilizado.

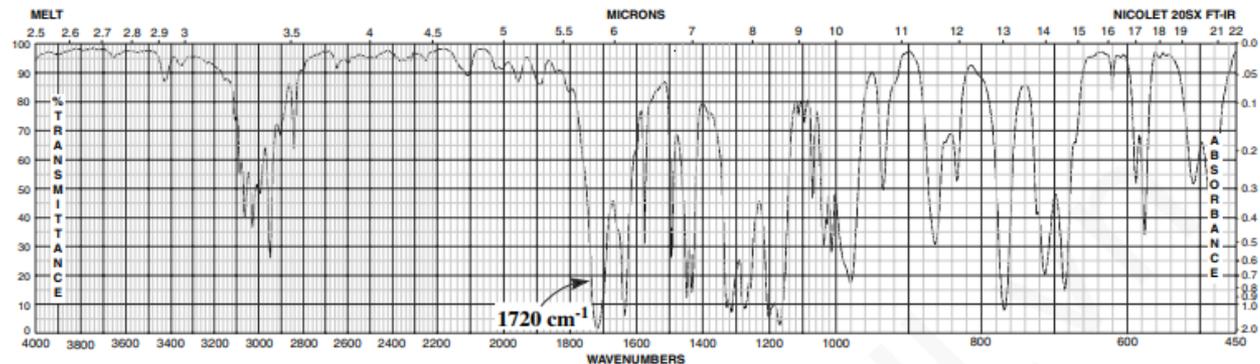


Expansão da região entre 6,35 a 6,6 ppm.



Expansão da região em 4,3 ppm.





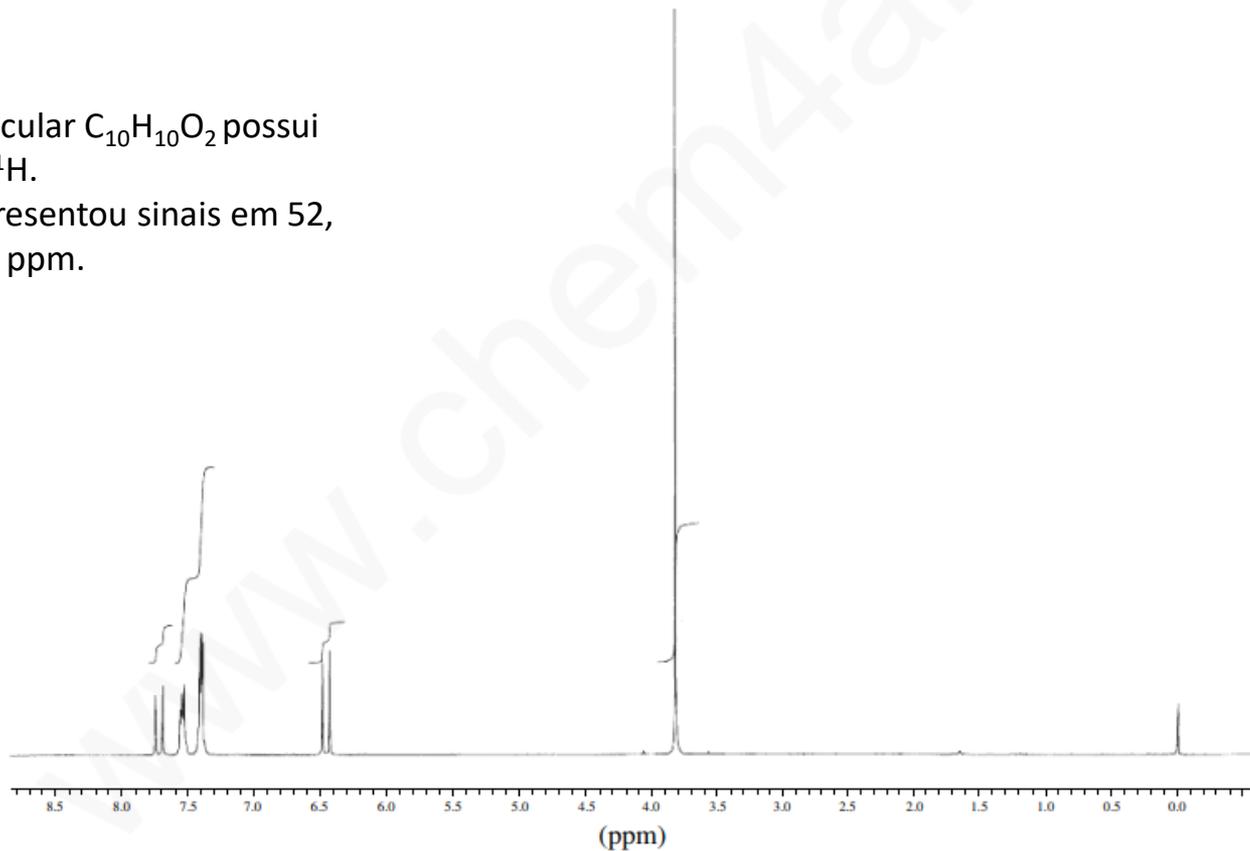
## Problema 2

O composto de fórmula molecular  $C_{10}H_{10}O_2$  possui os espectros no IV e RMN de  $^1H$ .

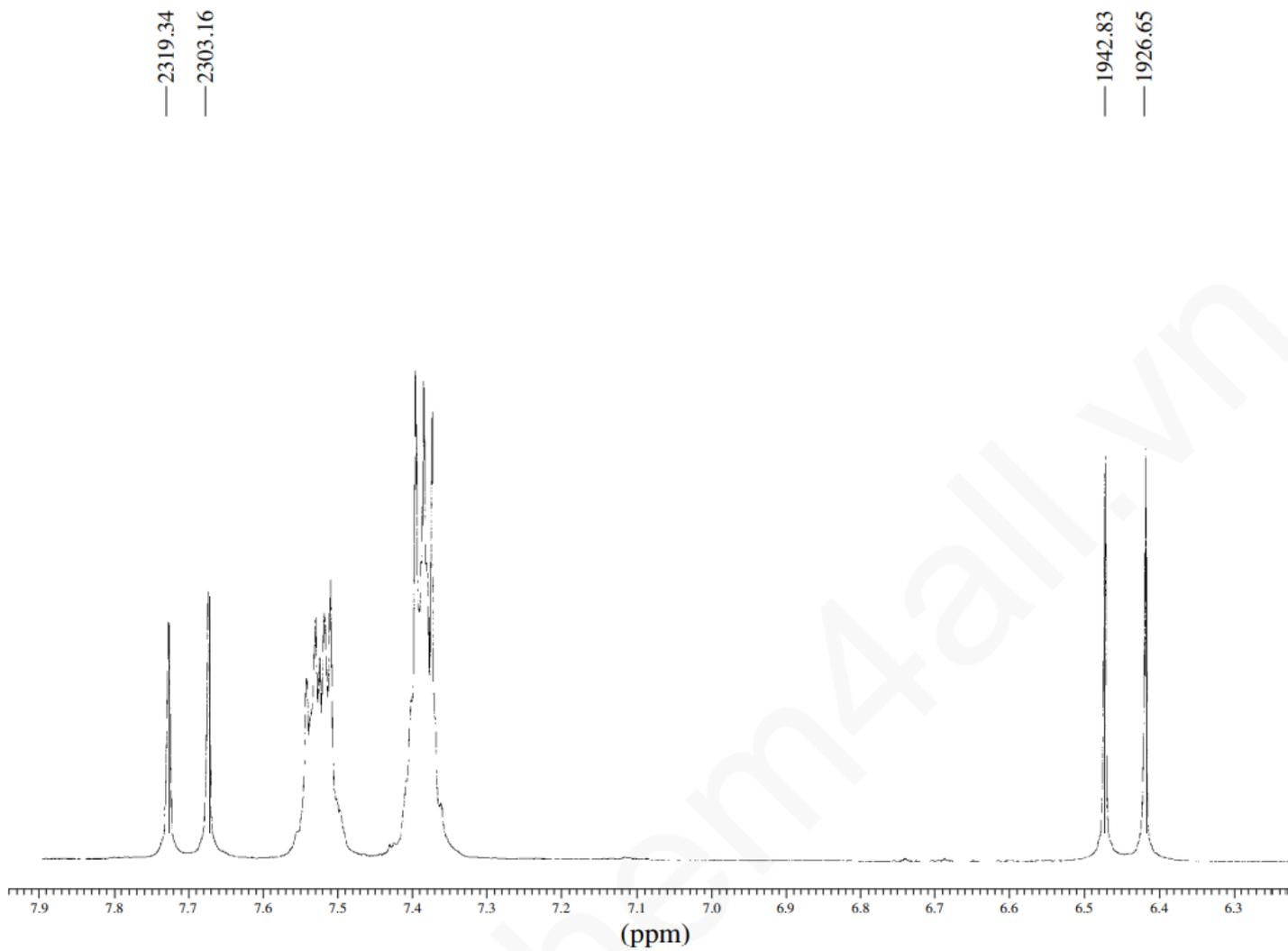
O espectro de RMN de  $^{13}C$  apresentou sinais em 52, 117, 128, 129, 130, 134 e 167 ppm.

Qual é a possível estrutura?

Expansão na próxima página.



## Problema 2



### Problema 3

O composto de fórmula molecular  $C_8H_{14}O_2$  apresentou no IV absorções entre  $3106 - 2876\text{ cm}^{-1}$ , em  $1720$  e  $1170\text{ cm}^{-1}$  e uma absorção de intensidade média em  $1640\text{ cm}^{-1}$ .

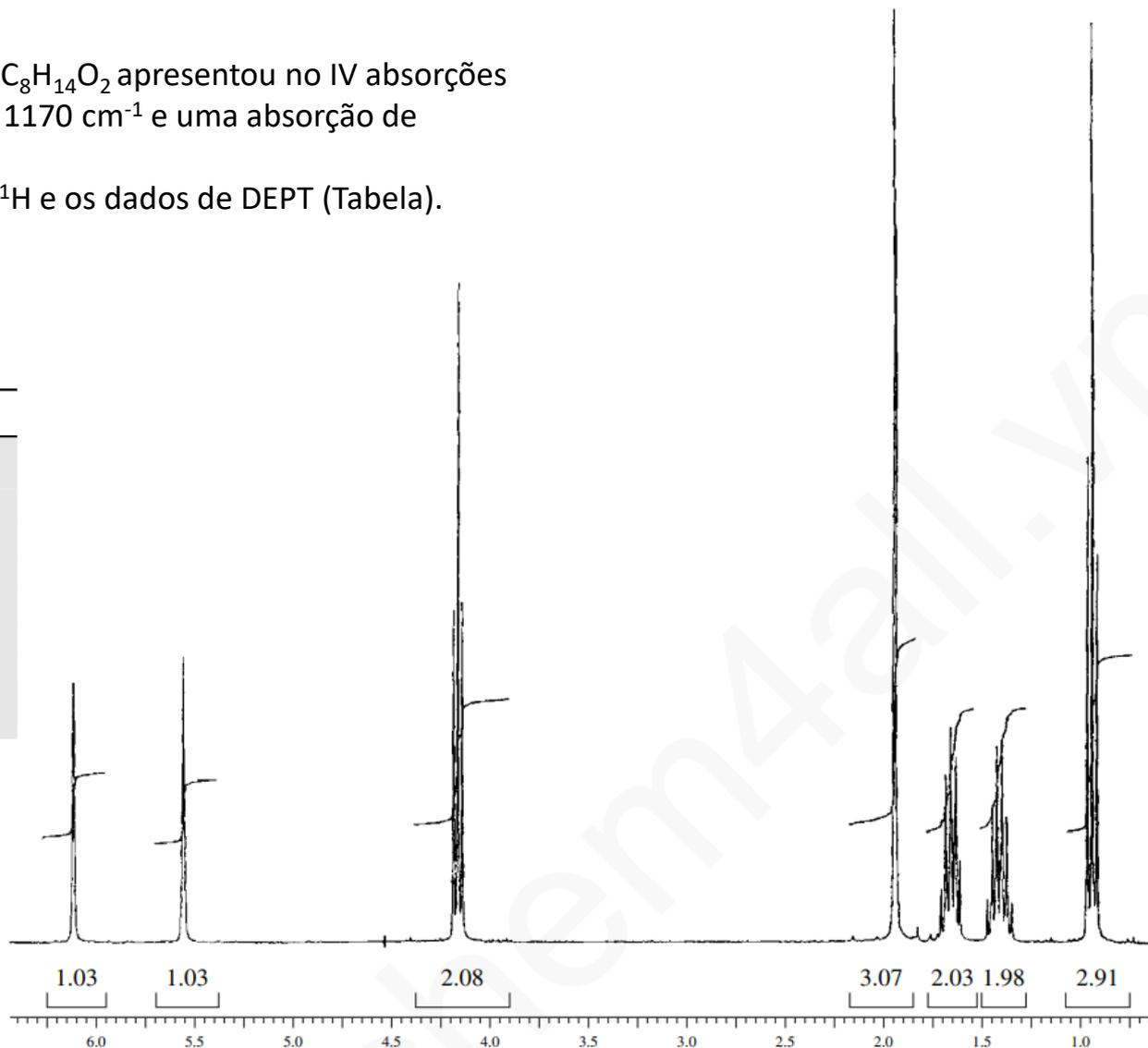
Apresentou o espectro de RMN de  $^1H$  e os dados de DEPT (Tabela).

Qual é a possível estrutura?

Normal Carbon	DEPT-135	DEPT-90
13.73 ppm	Positive	No peak
18.33	Positive	No peak
19.28	Negative	No peak
30.76	Negative	No peak
64.54	Negative	No peak
125.00	Negative	No peak
136.63	No peak	No peak
167.51	No peak	No peak

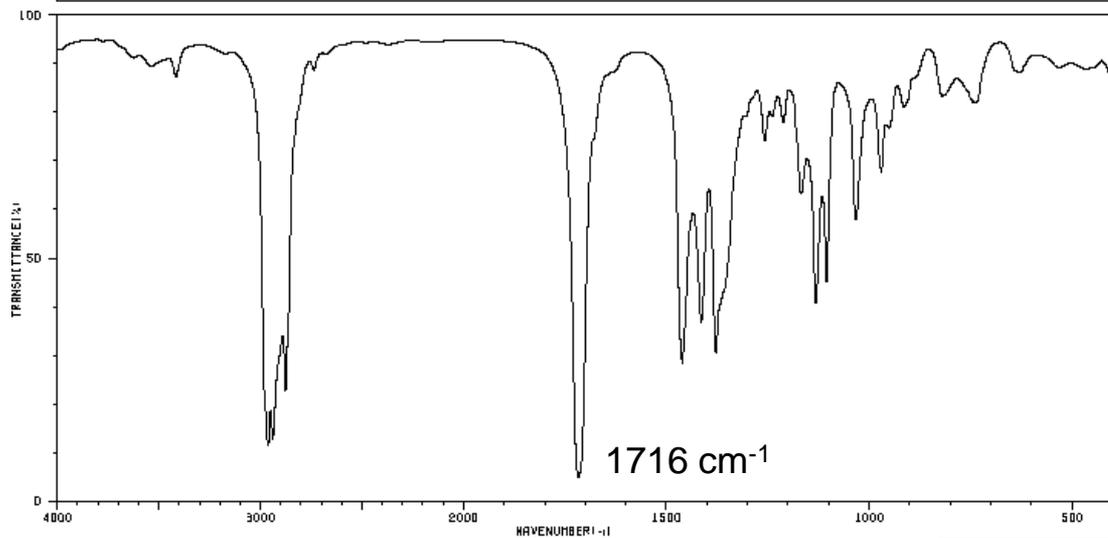
DEPT 135: positivo (CH ou CH<sub>3</sub>)

DEPT 90: somente CH



HIT-NO=1140 SCORE= ( ) SDBS-NO=704 IR-NIDA-01521 : LIQUID FILM

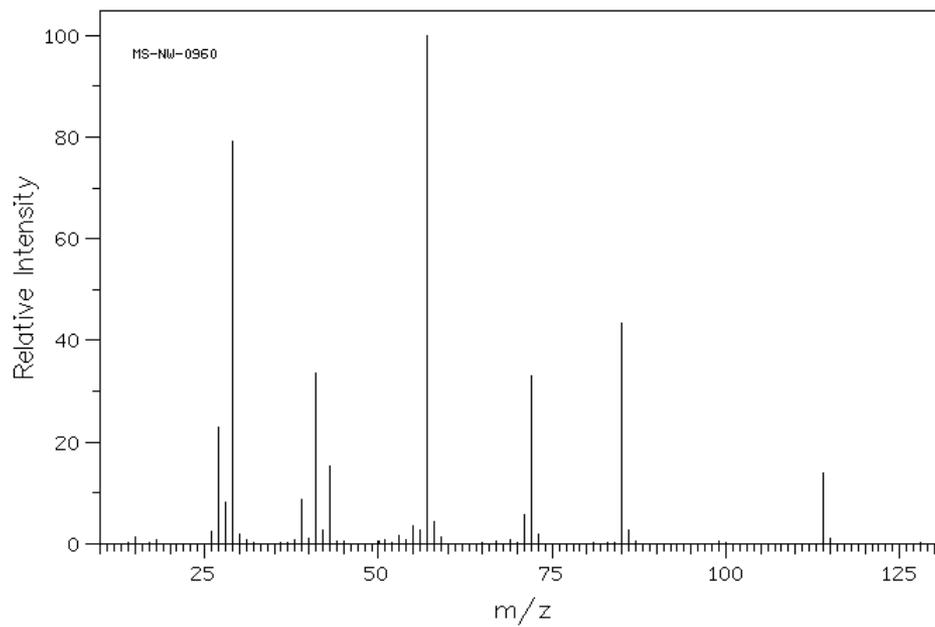
C<sub>7</sub>H<sub>14</sub>O



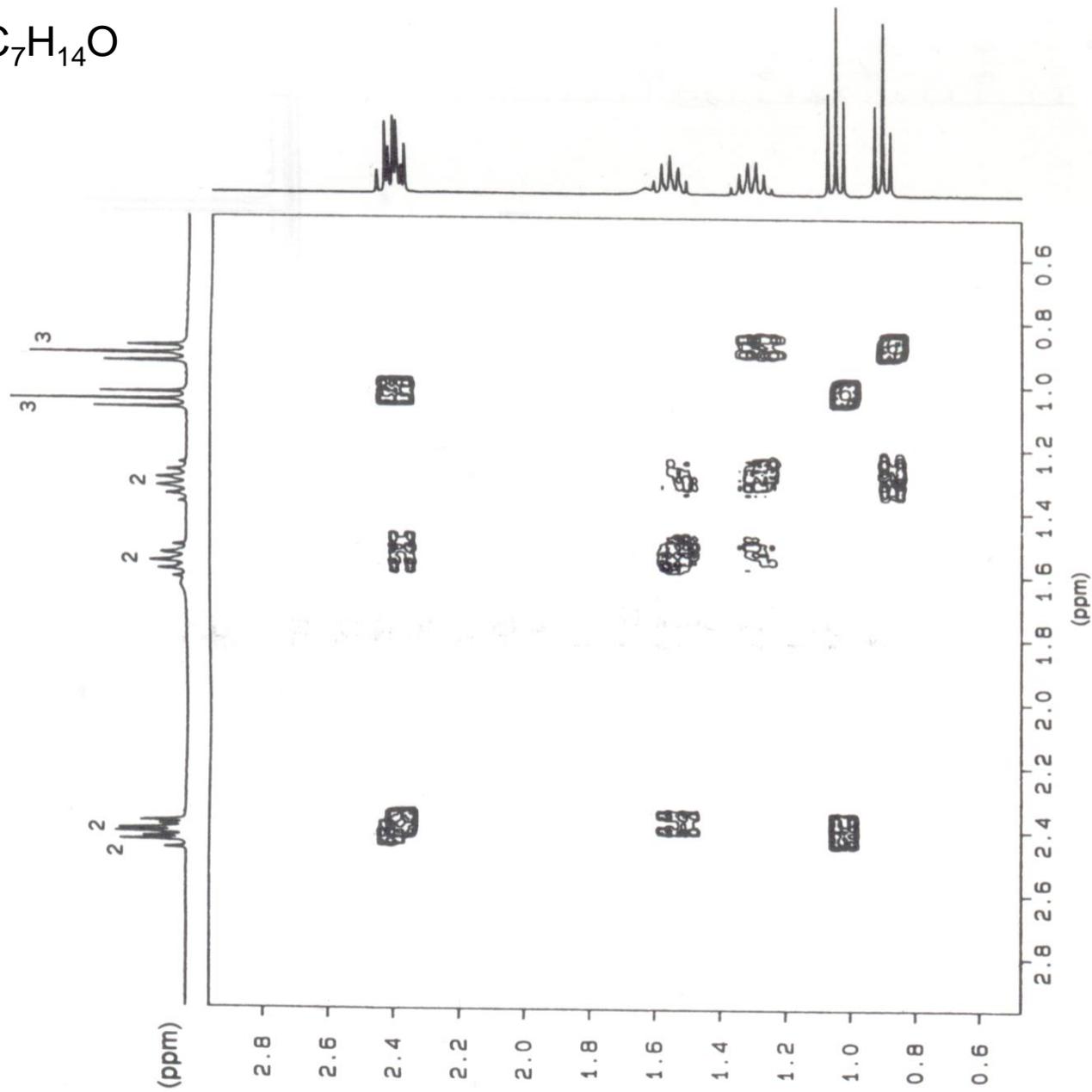
3638	86	1461	26	1106	43	807	81
3415	84	1414	35	1033	55	747	79
2962	10	1378	29	970	84	741	78
2939	12	1268	70	958	74	641	84
2876	21	1212	74	915	79	632	84
2756	84	1168	60	821	79		
1716	4	1131	39	816	79		

Problema 4

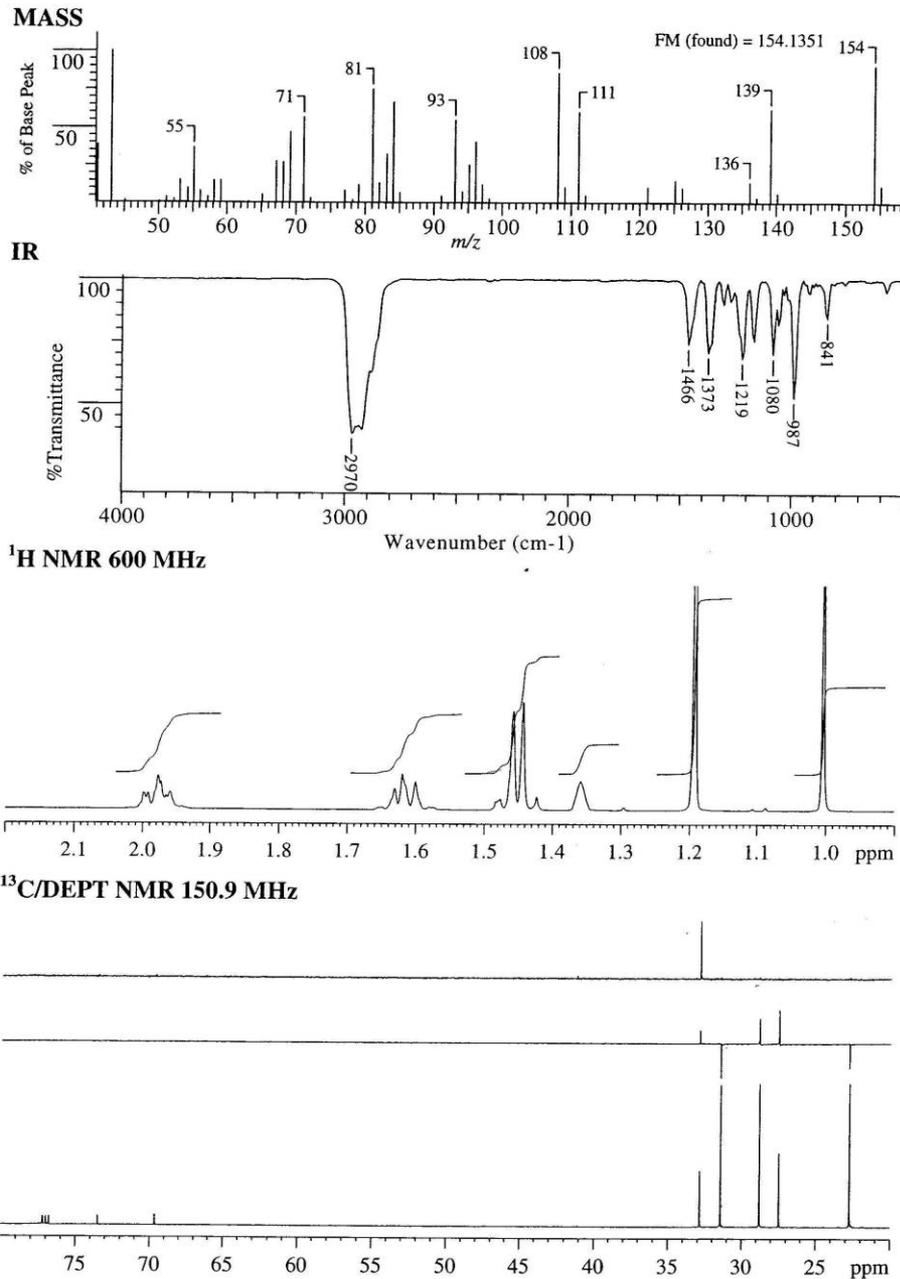
C<sub>7</sub>H<sub>14</sub>O

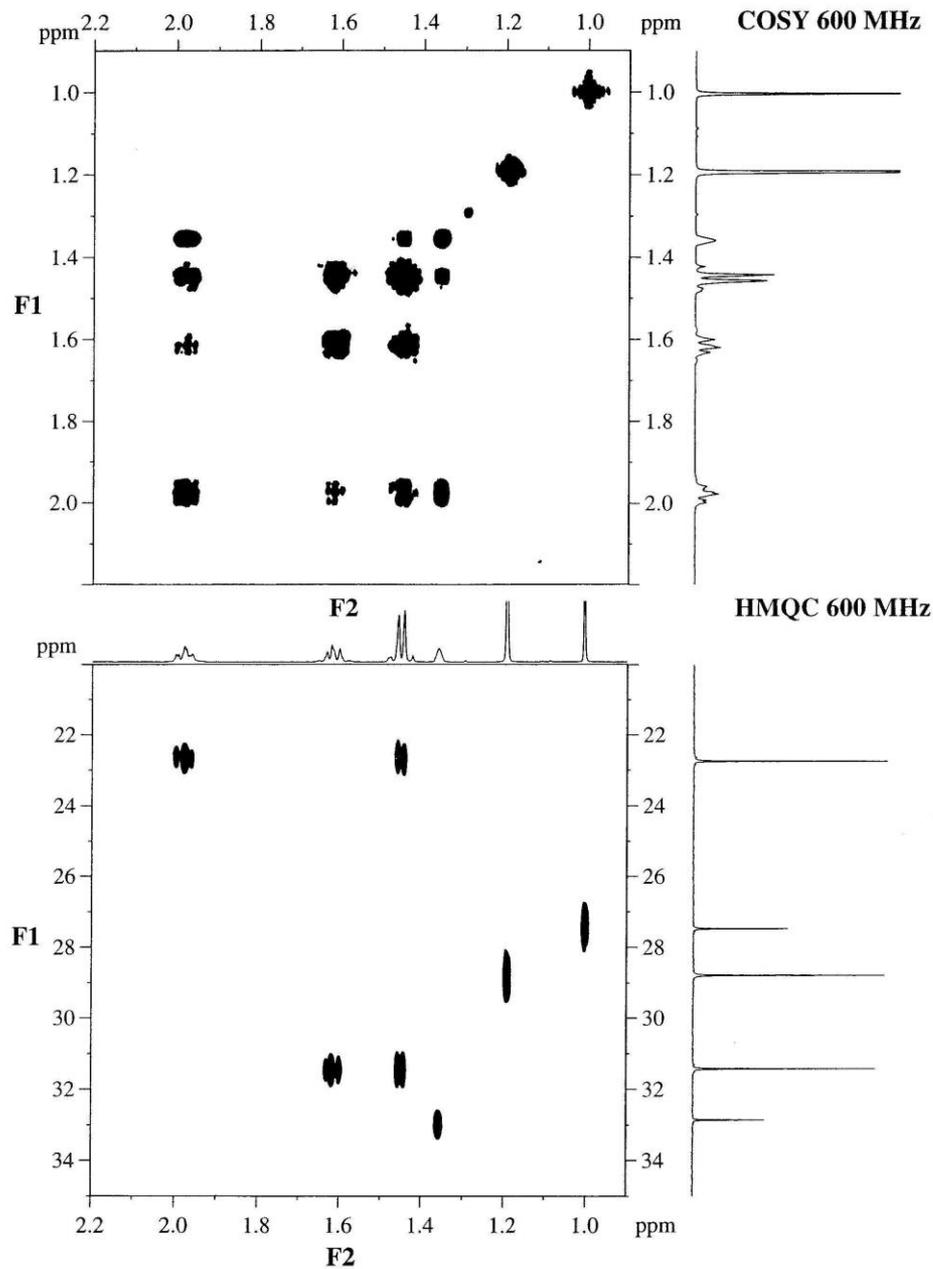


# Problema 4 (COSY) C<sub>7</sub>H<sub>14</sub>O



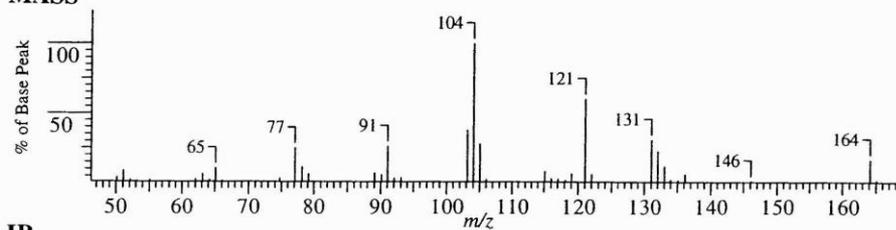
# Problema 5 (Silverstein)



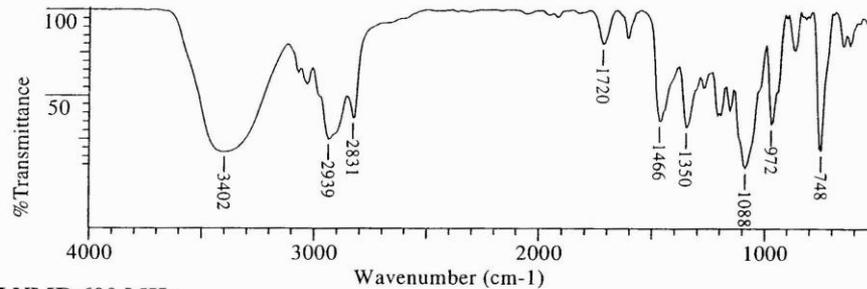
Problema 5  
(Silverstein)

# Problema 6 (Silverstein)

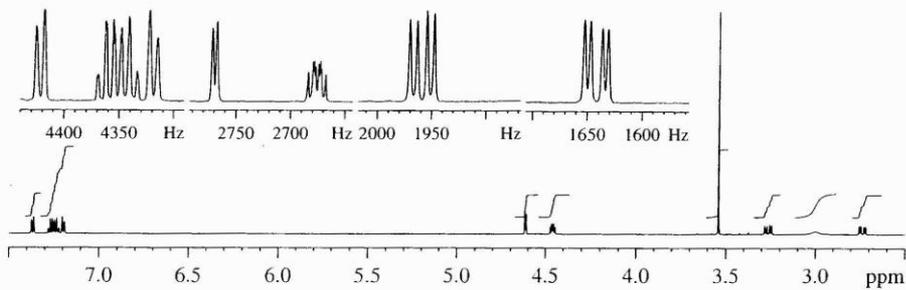
## MASS



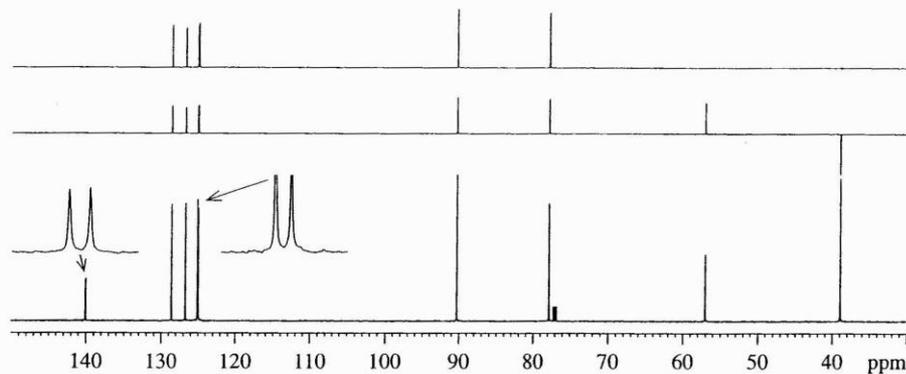
## IR



## $^1\text{H}$ NMR 600 MHz



## $^{13}\text{C}/\text{DEPT}$ NMR 150.9 MHz





Problema 6  
(Silverstein)

