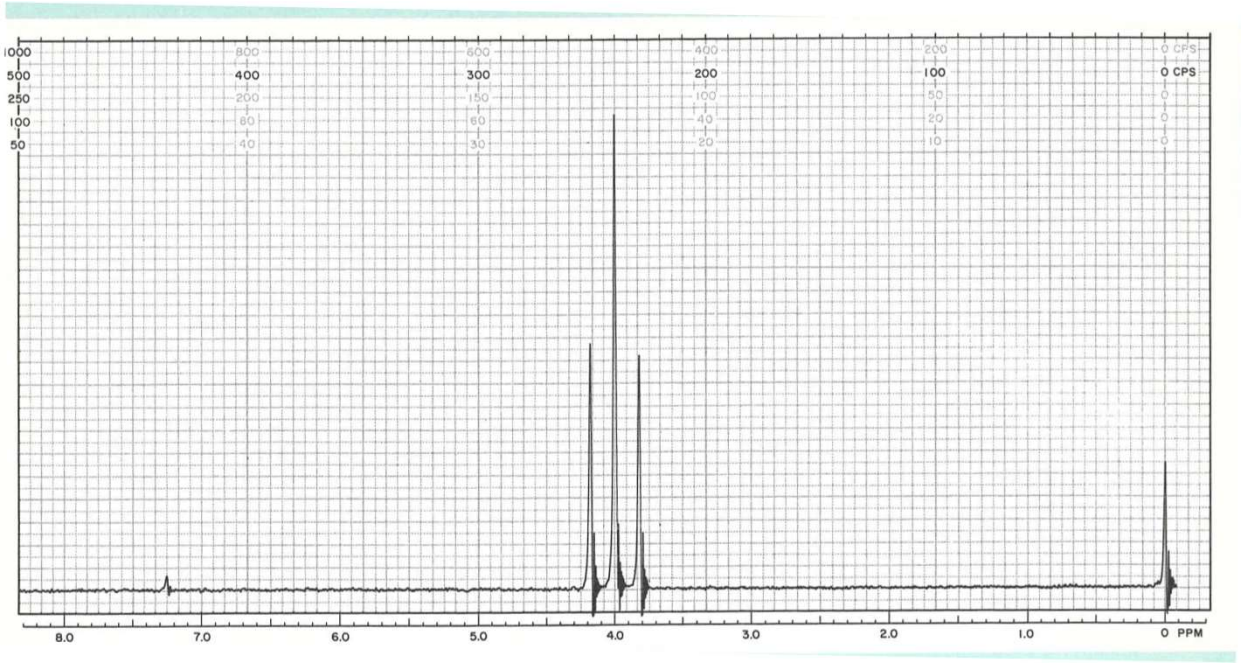
Esercizio 1

Un composto di formula $C_2H_2Cl_2F_2$ dà il seguente spettro ^{1}H-NMR, proporre una struttura per il composto e giustificare la molteplicità del segnale.

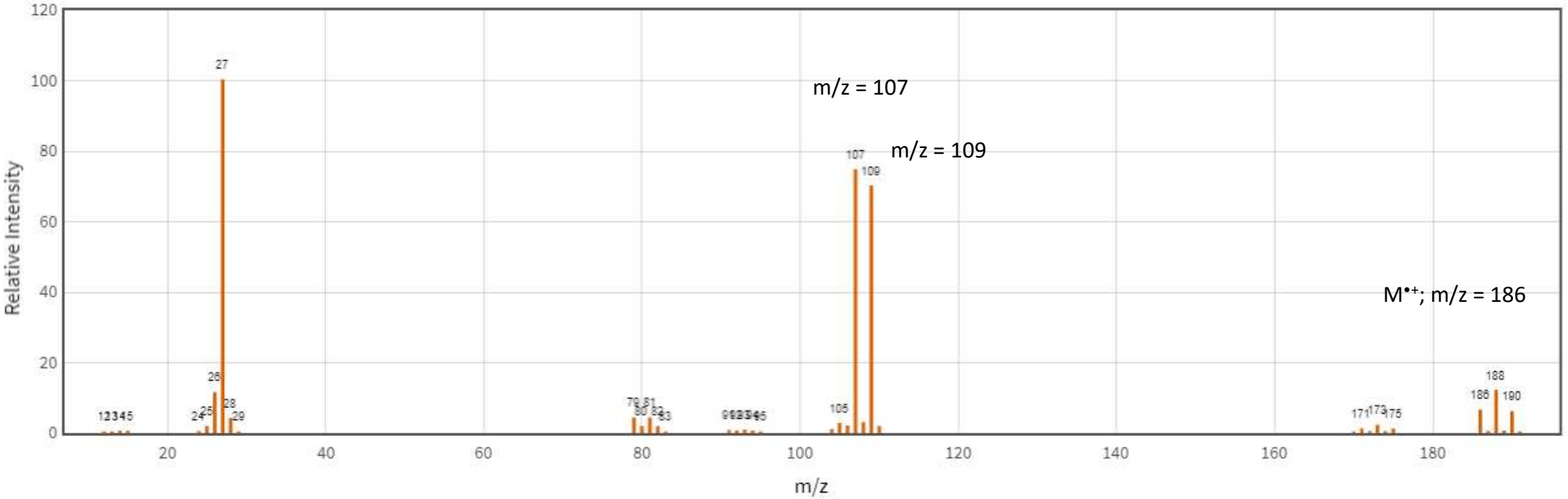


^{1}H-NMR: 60 MHz, $CDCl_3$

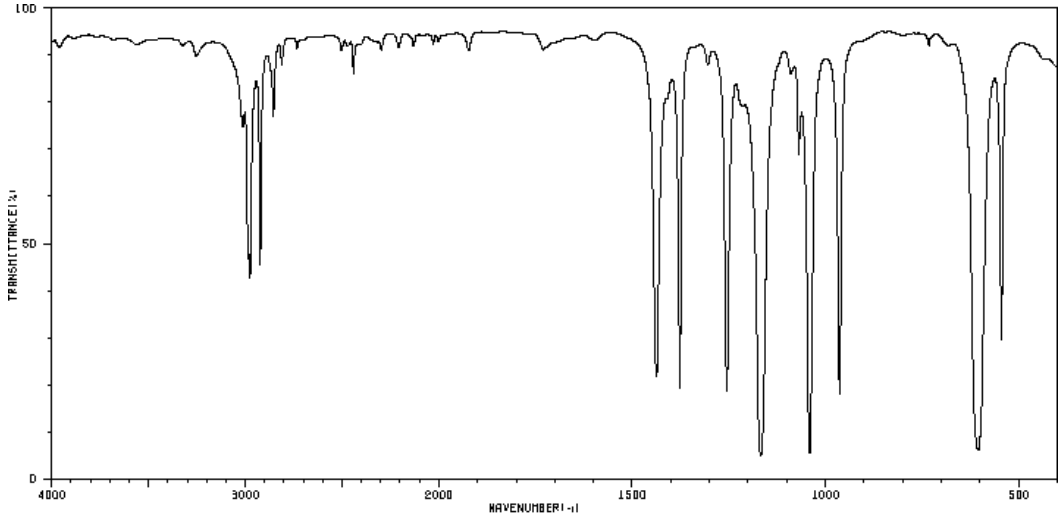
4.0 ppm: tripletto

Esercizio 2

I seguenti dati spettrali si riferiscono ad un composto con due atomi di carbonio. Determinarne la struttura



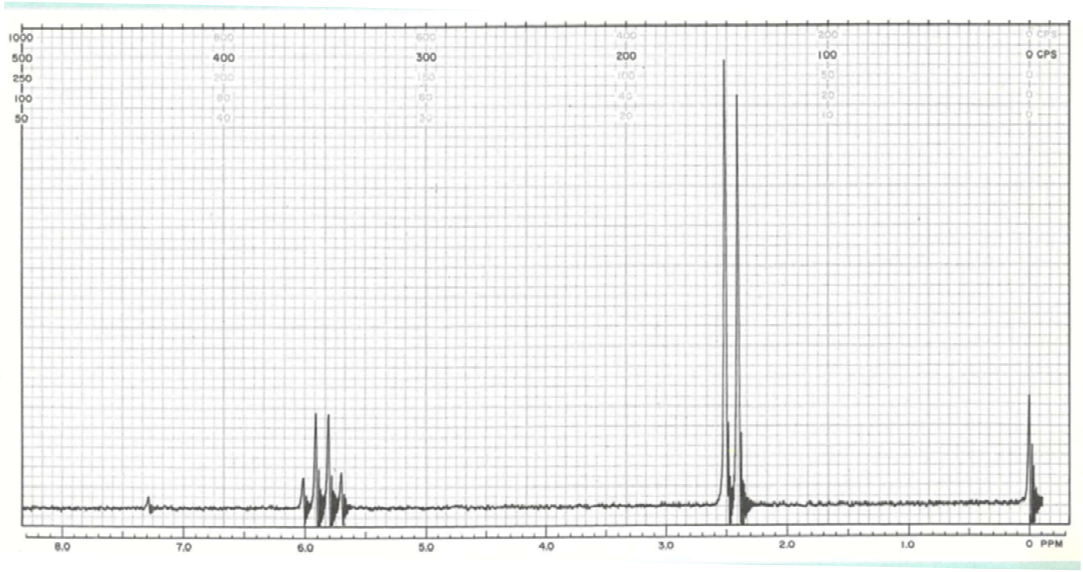
Esercizio 2



IR: film liquido

Assorbimenti rilevanti

2976, 2923, 1438, 1377, 1168, 606 cm^{-1}



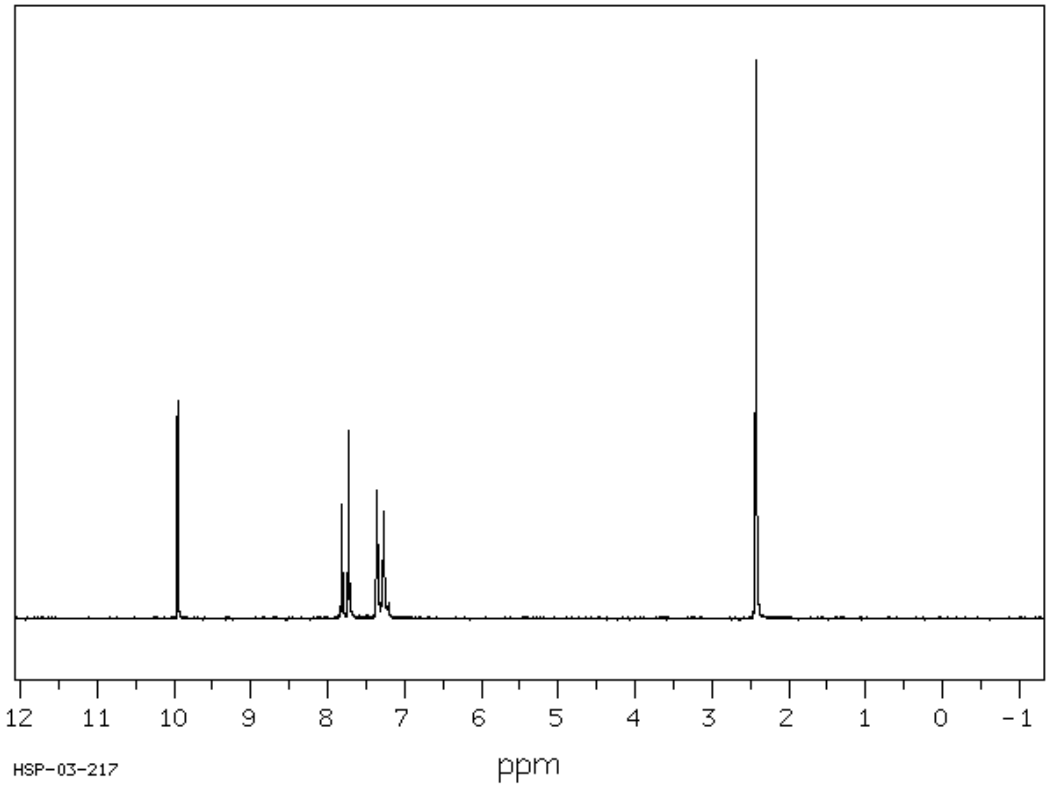
^{1}H-NMR: 60 MHz, $CDCl_3$

5.86 ppm: quartetto di area 1

2.47 ppm: doppietto di area 3

Esercizio 3

I seguenti dati spettrali si riferiscono ad un composto di formula C_8H_8O. Determinarne la struttura.



^{1}H-NMR: 90 MHz, $CDCl_3$

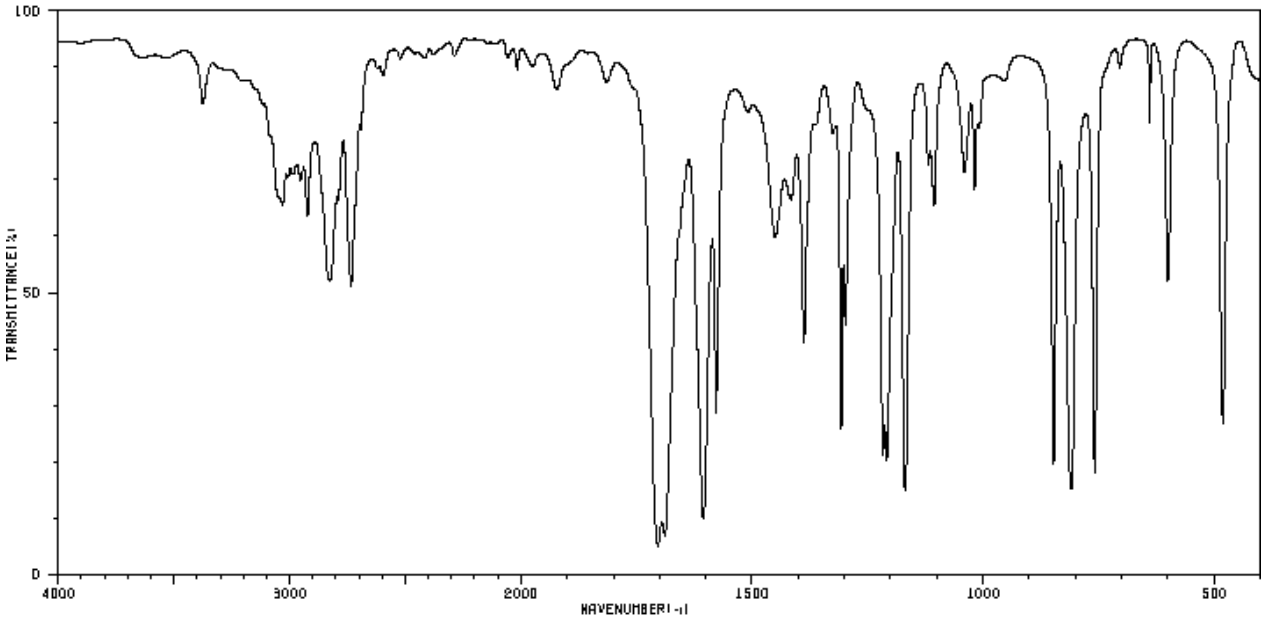
9.95 ppm: s, area 1

7.76 ppm: d, area 2

7.32 ppm: d, area 2

2.43 ppm: s, area 3

Esercizio 3

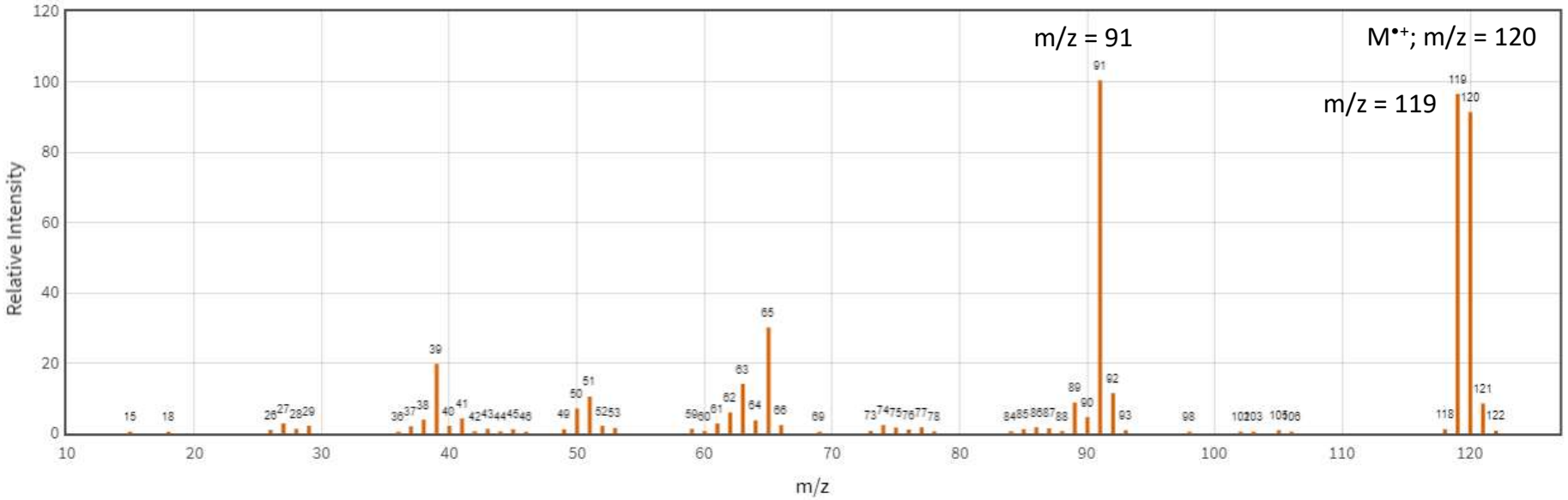


IR: film liquido

Assorbimenti rilevanti

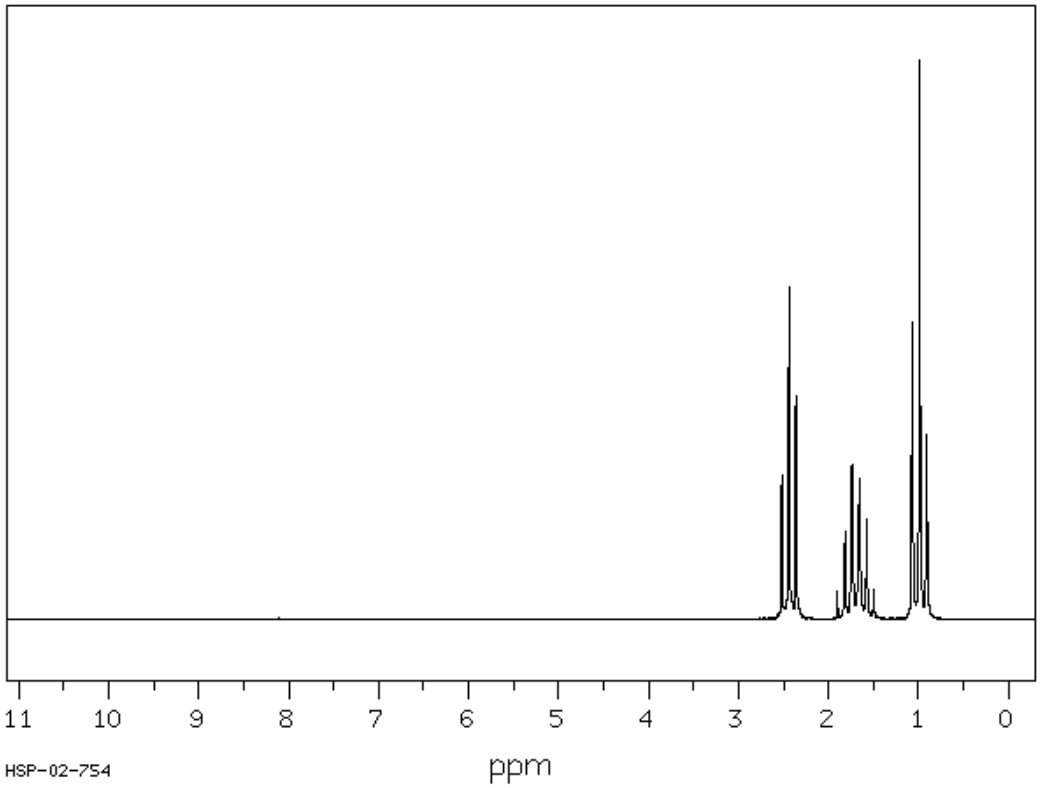
3044, 3031, 2827, 2734, 1704 cm^{-1} non 1740 cm^{-1} come mostrato a lezione

Esercizio 3



Esercizio 4

I seguenti dati spettrali si riferiscono ad un composto di formula $C_8H_{14}O_3$. Determinarne la struttura.



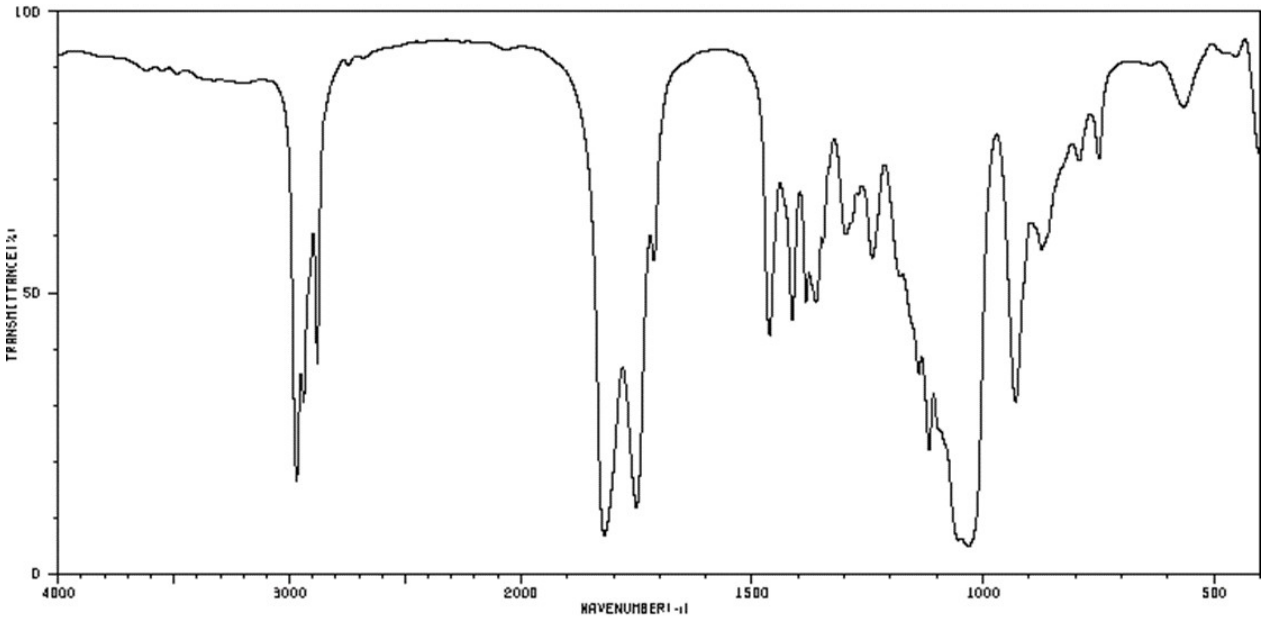
^{1}H-NMR: 90 MHz, $CDCl_3$

2.43 ppm: t, area 2

1.69 ppm: sest, area 2

1.00 ppm: t, area 3

Esercizio 4



IR: film liquido

2970	16	1413	43	1116	21	666	79
2940	29	1383	46	1039	5		
2880	36	1362	46	1031	4		
1819	6	1297	68	929	29		
1750	11	1287	60	874	55		
1712	53	1240	59	792	70		
1461	41	1140	34	749	70		