

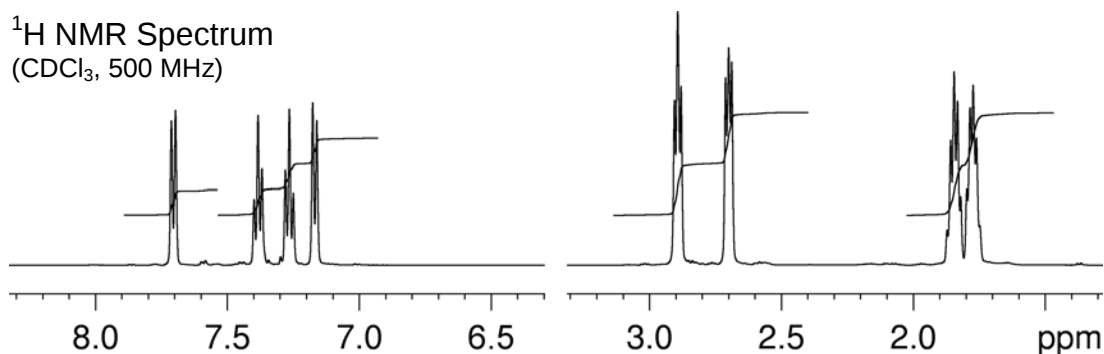
Problem 45

Identify the following compound. Draw a labelled structure, and use the ^1H - ^1H COSY, ^1H - ^{13}C me-HSQC and ^1H - ^{13}C HMBC spectra to assign each of the ^1H and ^{13}C resonances to the appropriate carbons and hydrogens in the structure.

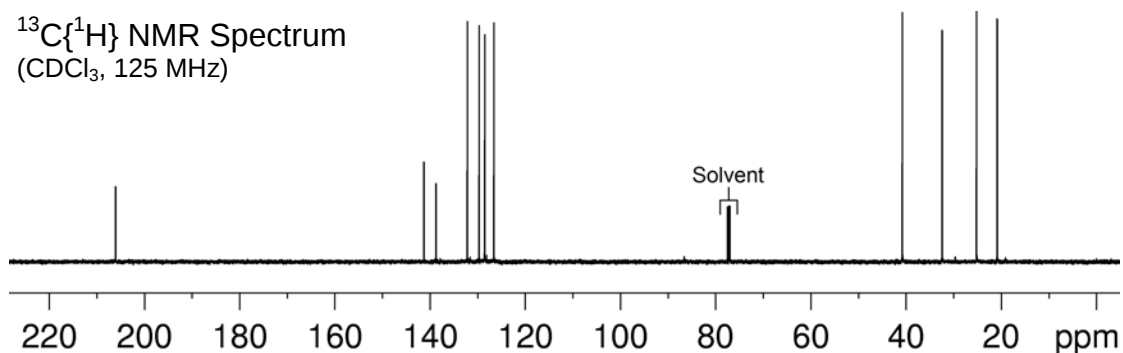
Molecular Formula: $\text{C}_{11}\text{H}_{12}\text{O}$

IR: 1676 cm^{-1}

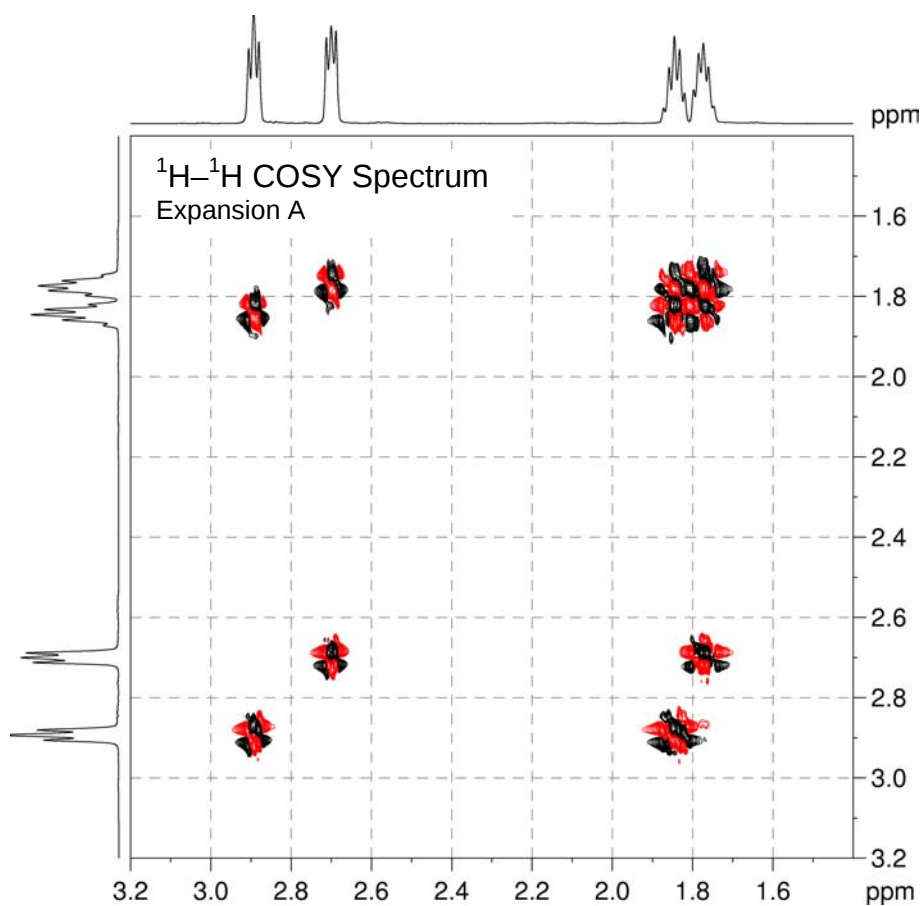
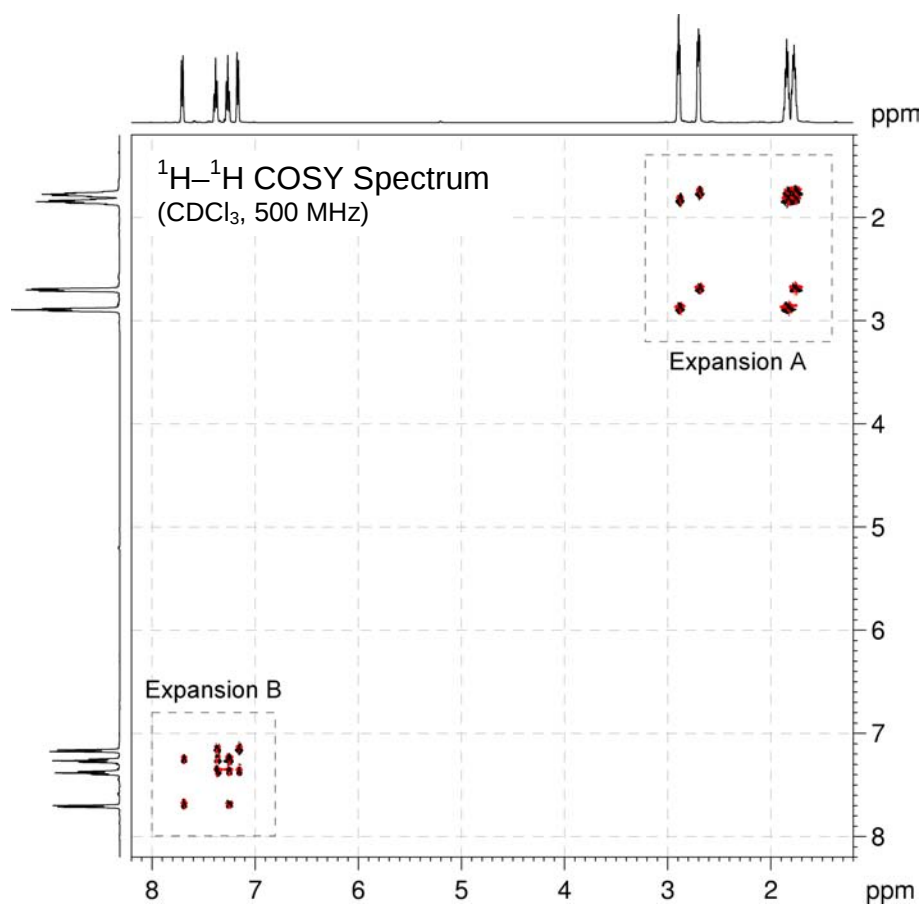
^1H NMR Spectrum
(CDCl_3 , 500 MHz)

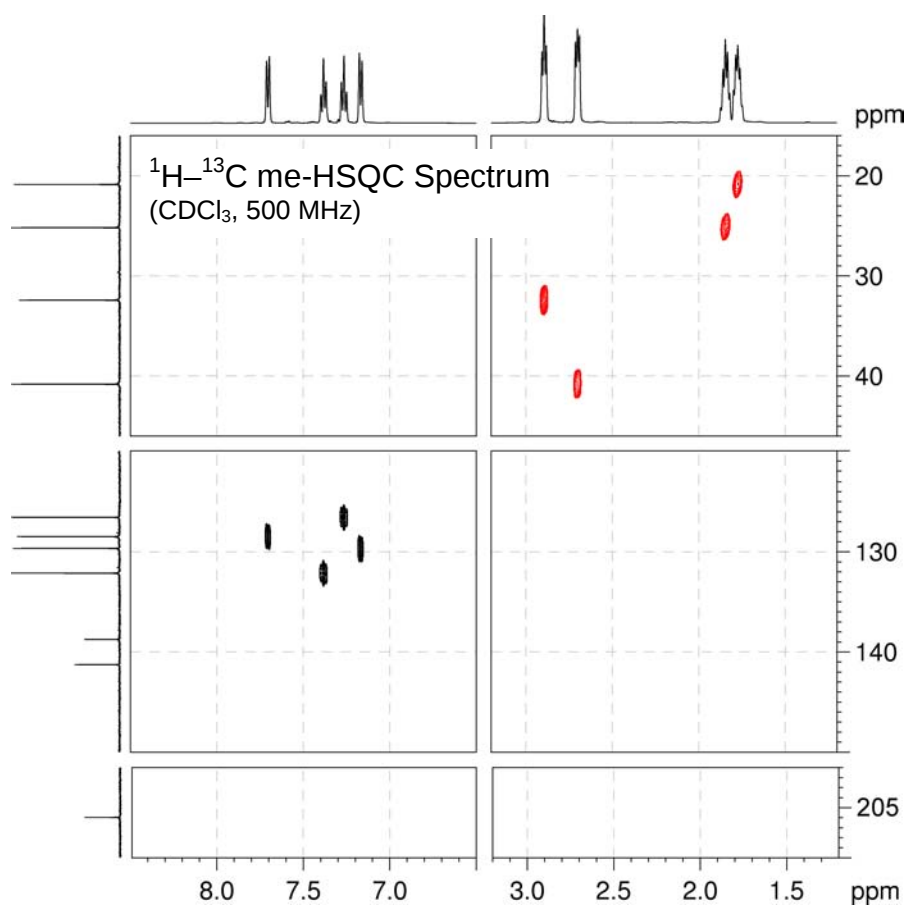
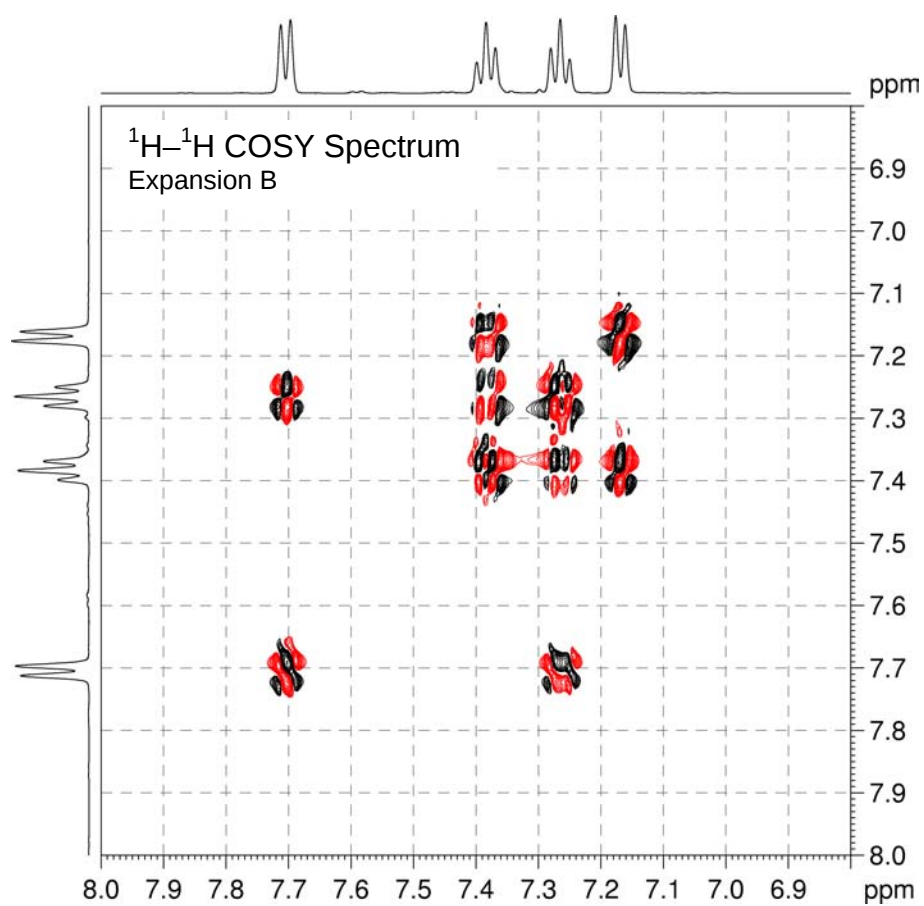


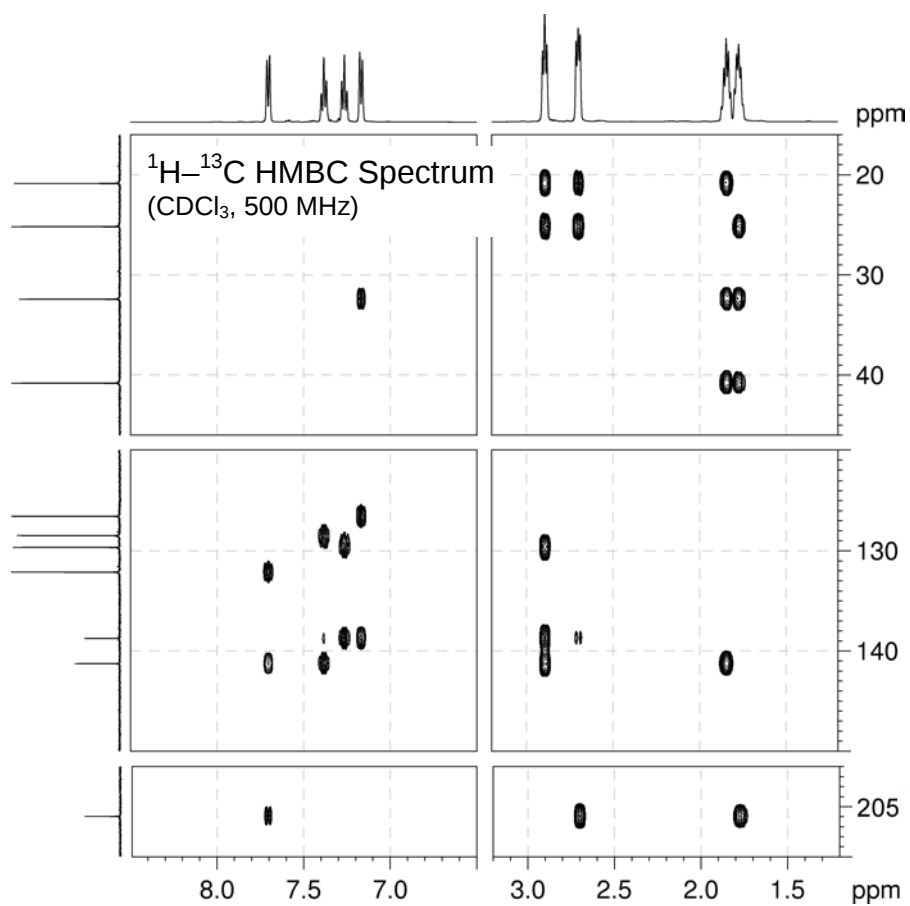
$^{13}\text{C}\{^1\text{H}\}$ NMR Spectrum
(CDCl_3 , 125 MHz)



Proton	Chemical Shift (ppm)	Carbon	Chemical Shift (ppm)







Structure: