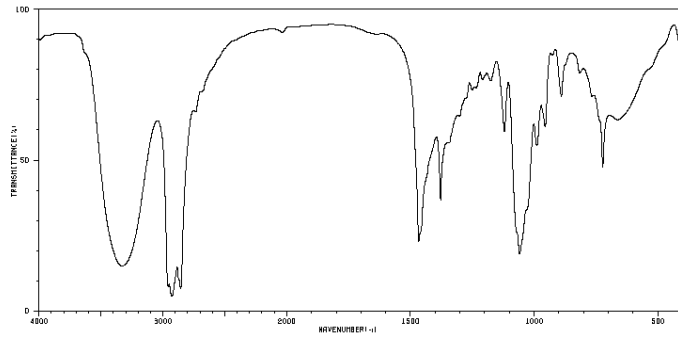
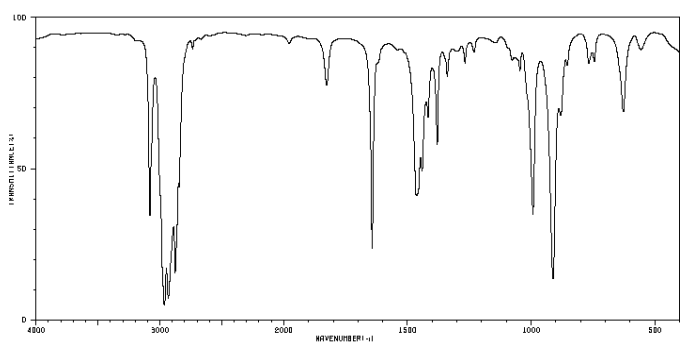
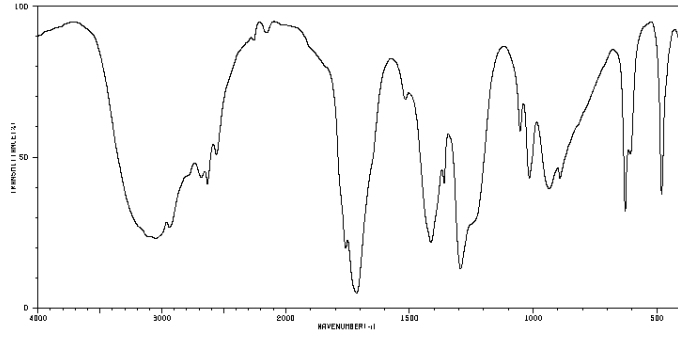
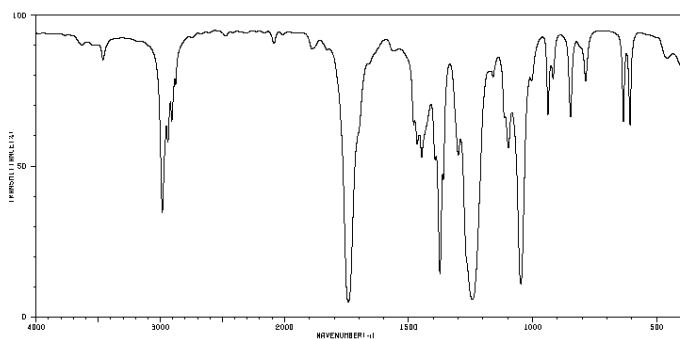
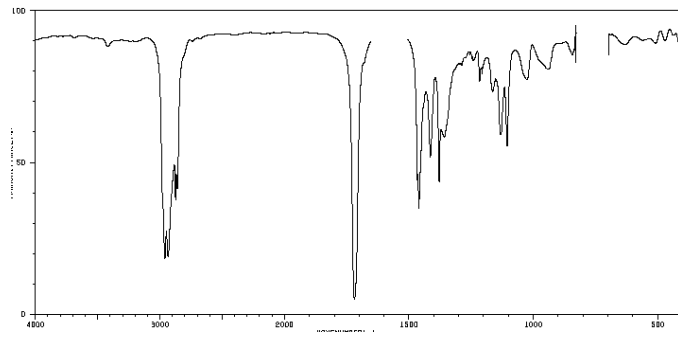
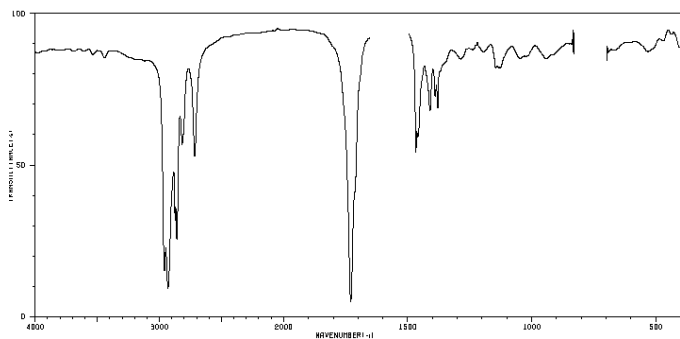


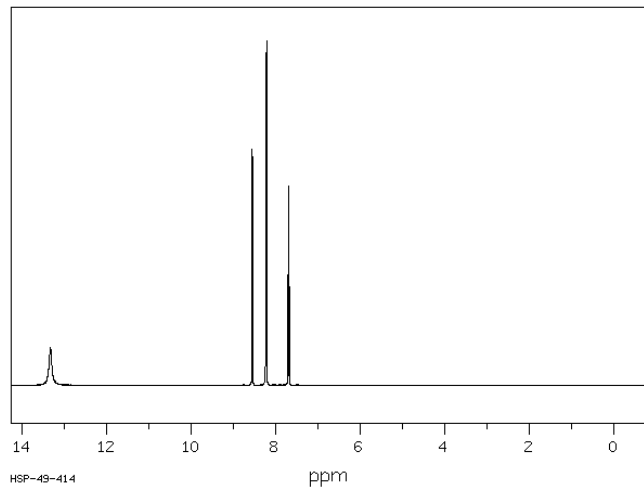
Name \_\_\_\_\_

Section \_\_\_\_\_

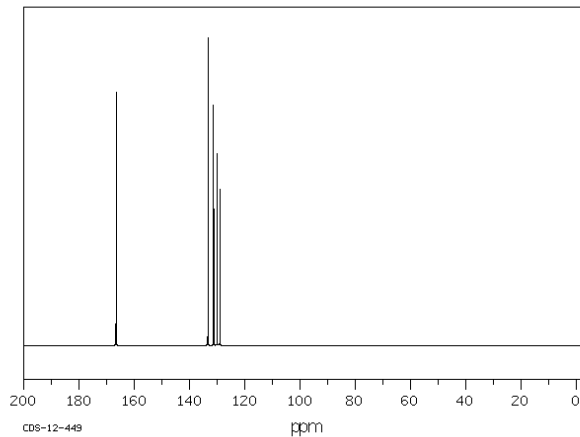
IR-Identify the following IR spectra by functional group. Only one functional group is present per spectrum. Possible functional groups: alkane, alkene, alkyne, nitrile, ketone, aldehyde, acid, ester, anhydride, alcohol, amine, amide. **You must identify the major peaks used to make the determination to receive credit.**



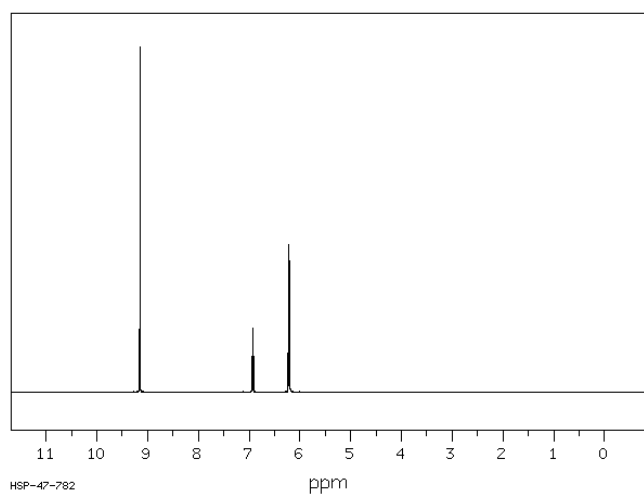
**NMR**-Determine the structure of the following compounds from their  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra. Show structural assignments to peaks used to make the identification. Additional info is provided with clues to functional groups, etc. present. Attach work showing structures tried that do not fit. **No credit if work is not shown.**



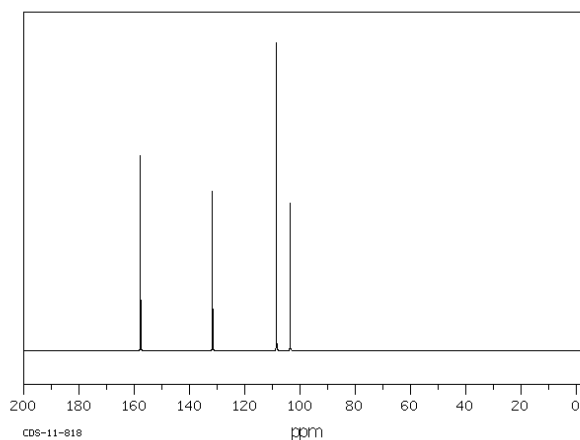
$\text{C}_8\text{H}_6\text{O}_4$  H-NMR Aromatic peaks correspond to 4 H's.



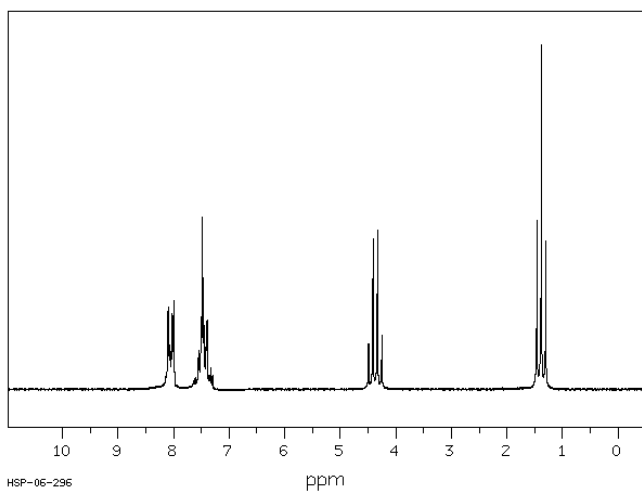
$\text{C}_8\text{H}_6\text{O}_4$  C-NMR 4 peaks in 120-140 ppm group.



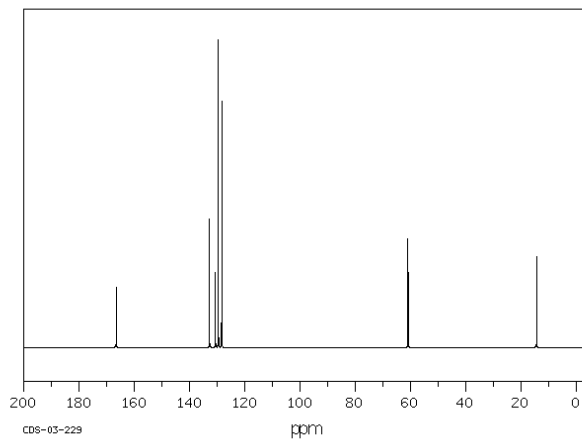
$\text{C}_6\text{H}_6\text{O}_2$  H-NMR Aromatic peaks correspond to 4 H's. IR shows strong, broad absorption around  $3200\text{ cm}^{-1}$ .



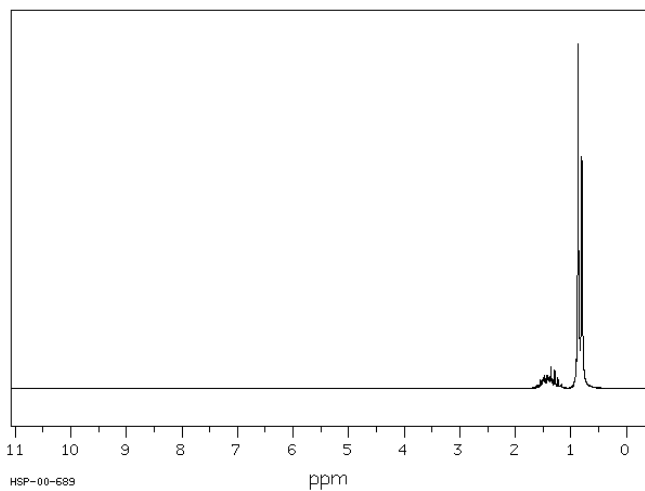
$\text{C}_6\text{H}_6\text{O}_2$  C-NMR 4 peaks.



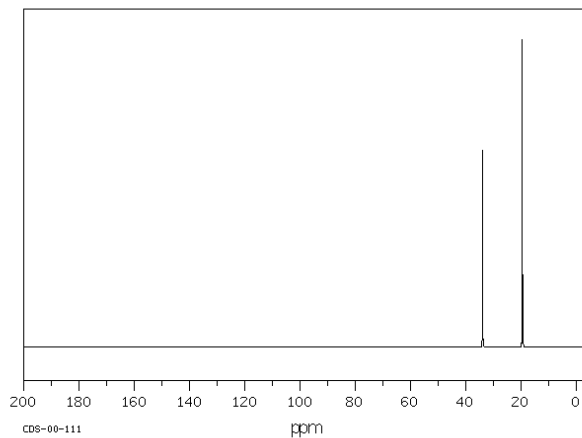
$C_9H_{10}O_2$  H-NMR Aliphatic peaks are q, t.  
IR shows strong peaks at  $1720$  &  $1280\text{ cm}^{-1}$ ,



$C_9H_{10}O_2$  C-NMR 4 peaks in 120-140 ppm group.



$C_6H_{14}$  H-NMR Peaks are m(7x), d.



$C_6H_{14}$  C-NMR 2 peaks only.