4/19/12

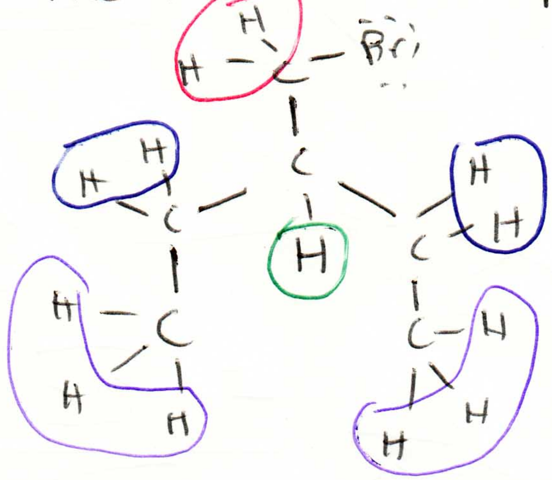
$C_6H_{13}Br$

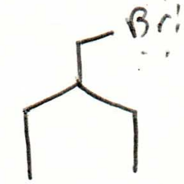
δ 3.460, d, 2H δ 1.45, T quint, 1H

δ 1.427, dq, 1H δ 0.895, t, 6H

$$D.O.U. = \frac{(2C + 2 - X + N) - H}{2}$$

Based on integration of 6, the molecule likely has two equivalent methyl groups (based on small # of atoms + the # of other peaks)





$C_6H_{10}O$ δ 5.79, ddt, 1H δ 5.02, dd, 1H

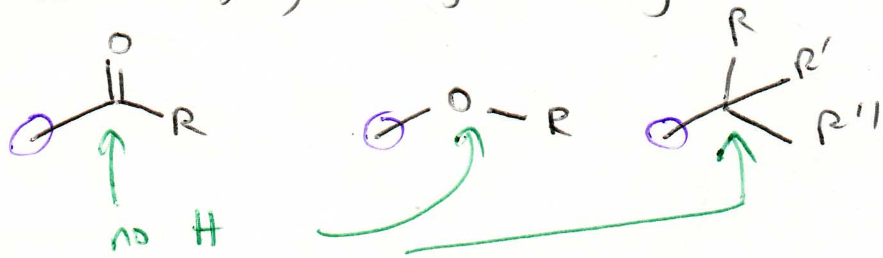
δ 4.97, dd, 1H δ 2.32, t, 2H

δ 2.34, dt, 2H δ 2.149, s, 3H

D.O.U → 2 : C≡C ; C=O + C=C ; C=O + ring ;

C=C + ring ; ring + ring

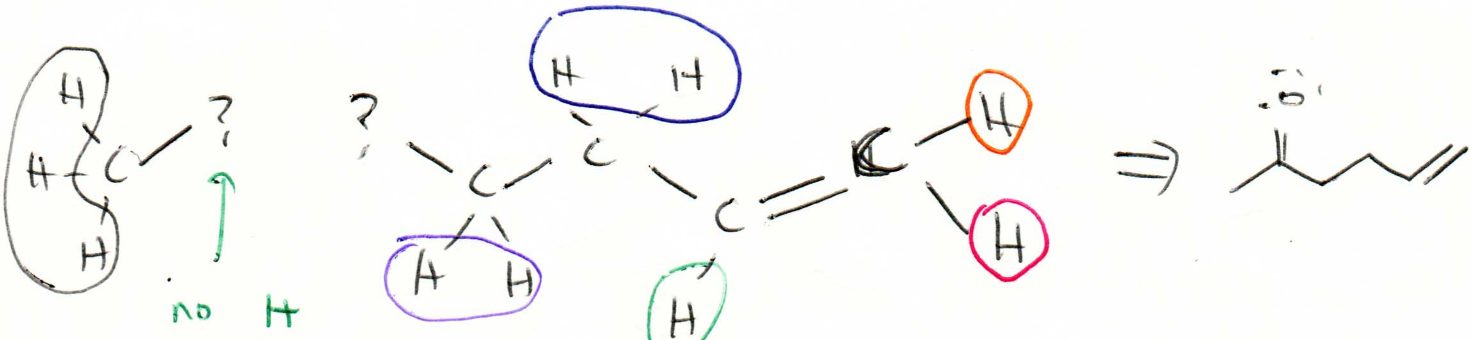
singlet!

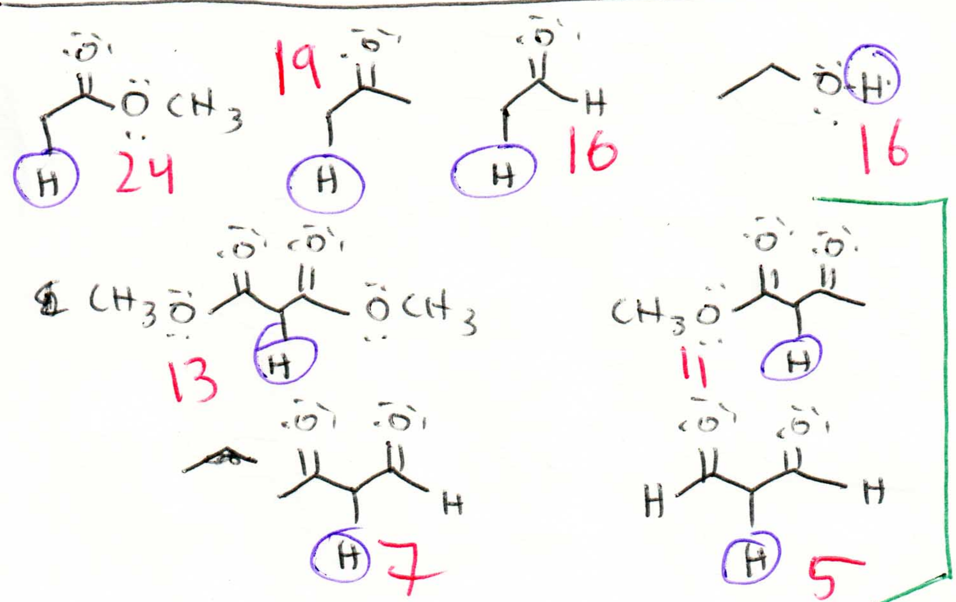


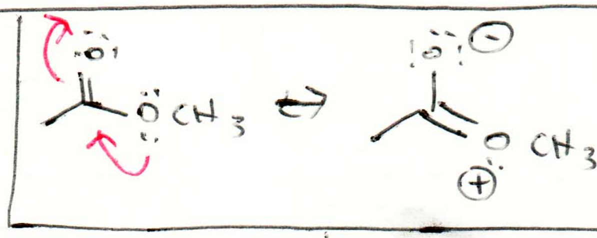
This molecule likely contains an alkene, since:

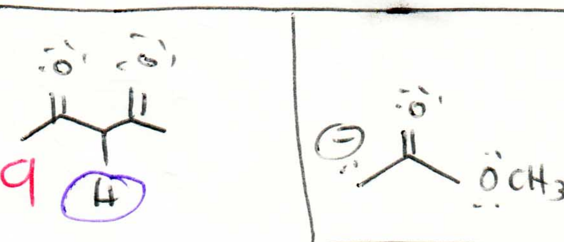
- There are multiple peaks with $\delta \sim 5$, each of which only integrates to 1.
- The alkene would be terminal, since that is the only way to have 3 individual hydrogens.

The compound also appears to have a carbonyl, based on the singlet that integrates to 3 w/ $2.0 \leq \delta \leq 2.3$.









→ Resonance stabilizes the anion formed, so the α-H are more acidic.

when electron density is provided to a C=O by either hyperconjugation or delocalization, the δ+ on the C=O carbon is reduced, meaning the delocalization of a neighboring ⊖ charge is less favorable, meaning an enolate would be more difficult to form, meaning the corresponding α-hydrogen would be less acidic.

Lab #2: Robinson Annulation Theory 625-628 Expt 628-629