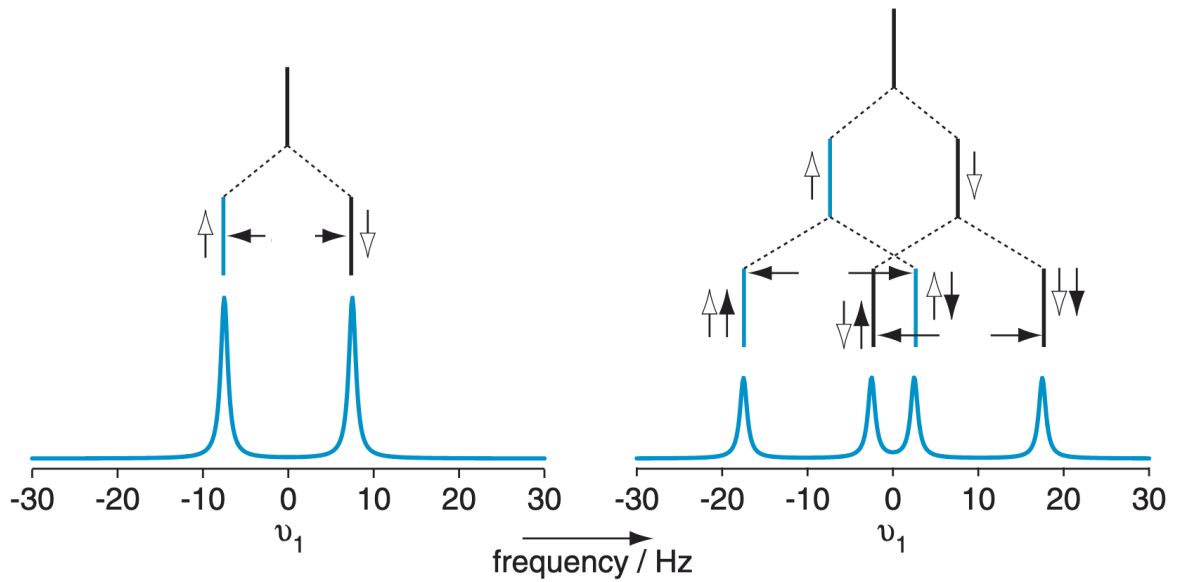
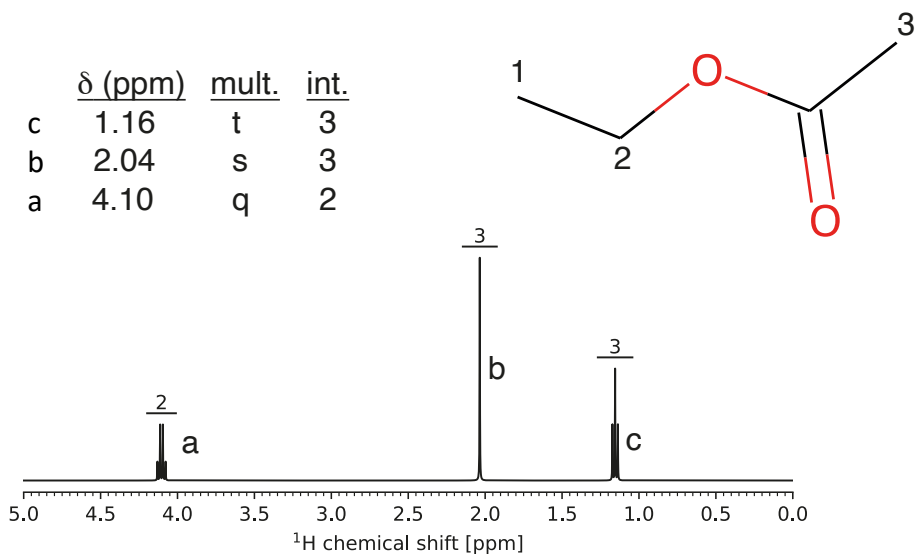


# Week 1 Q&A

1. Chemical shift is typically reported in units of
  - a. kHz
  - b. ppm**
  - c. MHz
  - d. Unitless
2. The small splittings in the peaks are due to through-bond interactions known as:
  - a. J-couplings**
  - b. Dipole-dipole couplings
  - c. Scalar couplings**
  - d. Zeeman splittings

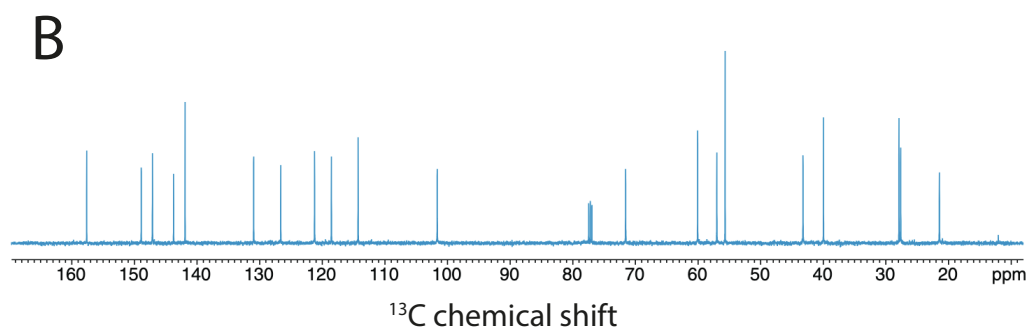
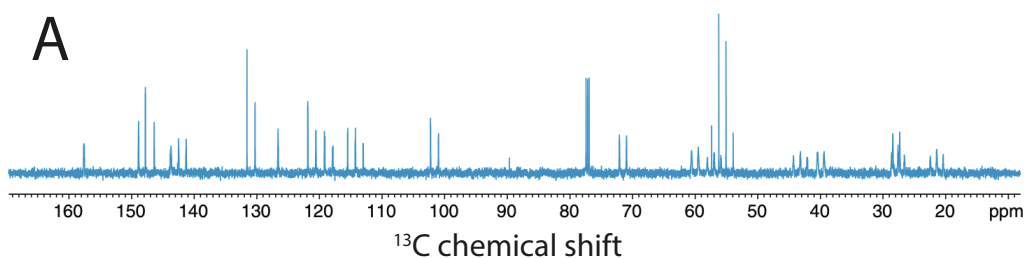


3. (Matching) Assign peaks a, b, and c to protons 1, 2, and 3.



3b, 2a, 1c

4. The difference between spectrum A and spectrum B is that
- They are measured at different fields
  - Spectrum B has a low-pass filter added
  - Spectrum B has broadband decoupling applied**
  - The molecule is different



5. The position of a particle on a circle can be represented using the complex exponential  $\exp(i\theta)$  or  $e^{i\theta}$ .
- a. **True**
  - b. False