

5.E: Structure Determination (Exercises)

P5.1:

- For each molecule below, draw in all hydrogen atoms, and label them H_a , H_b , etc., with chemically equivalent hydrogens having the same label.
- Predict splitting patterns for all proton signals.



P5.2: For each of the 20 common amino acids, predict the number of signals in the proton-decoupled $^{13}\text{C} - \text{NMR}$ spectrum.

P5.3: Match spectra below to their corresponding structures A-F. Make complete peak assignments for all structures.

(in all $^1\text{H} - \text{NMR}$ data tables in the following problems, peak relative integration values are listed in which the smallest area peak is equal to 1)

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