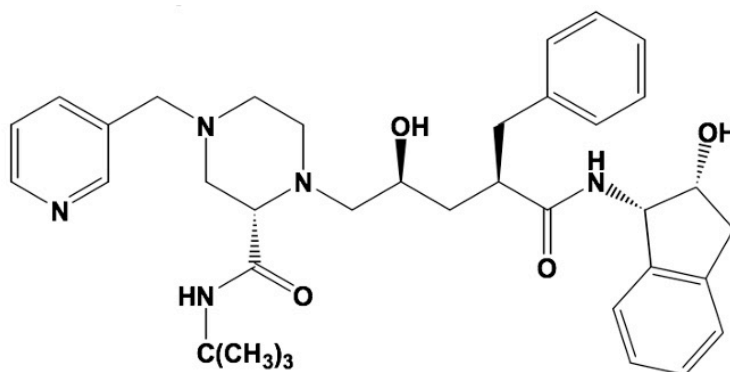


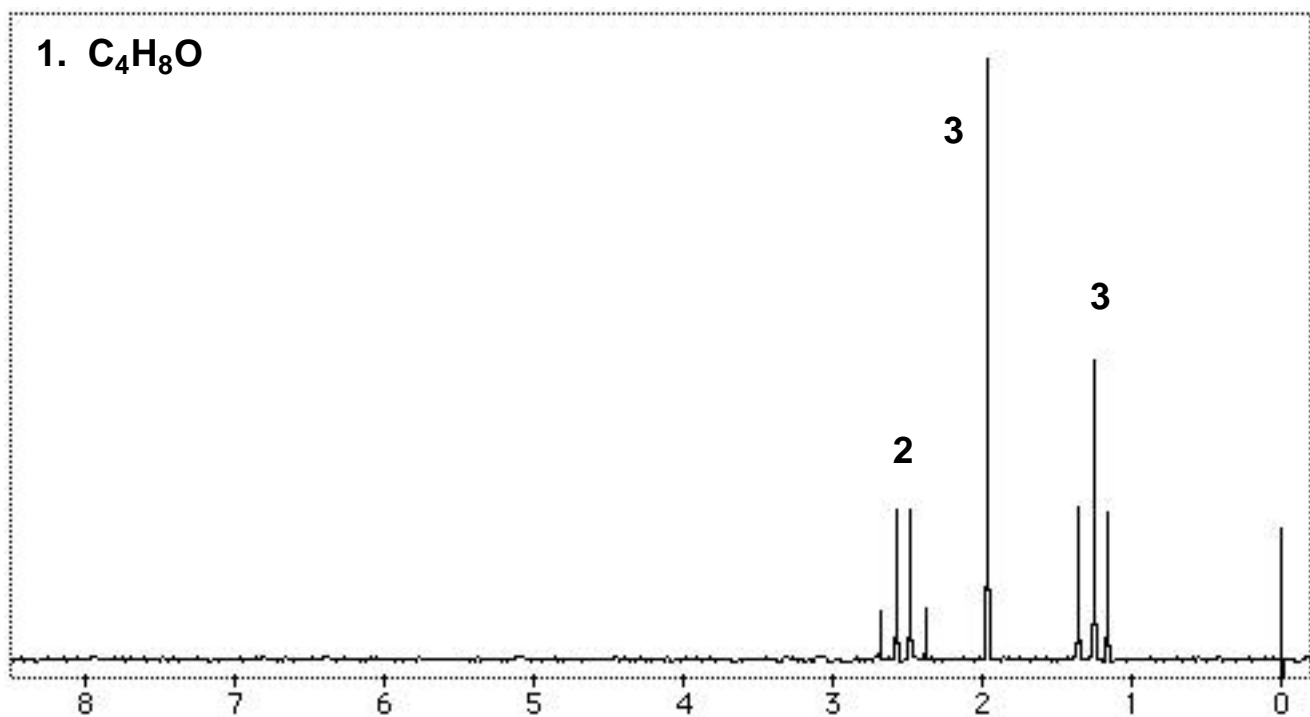
CHE 310 – 002 & 003  
Lecture Homework #20

**Due:** Friday, March 8, 2019, 10:00 am.

1. Provide structures for the four  $^1\text{H}$  NMR spectra on the following pages.
2. Read the section in the text about  $^1\text{H}$  NMR of alcohols (within section 13.13) and answer the following:
  - a) Is spin-spin splitting usually observed between an alcohol proton and protons on adjacent carbons?
  - b) What happens to an OH peak in an a  $^1\text{H}$  NMR spectrum when  $\text{D}_2\text{O}$  is added?
3. Assign the absolute configuration (R/S) to each chiral center in the molecule below.



1.  $C_4H_8O$



2.  $C_5H_{10}O$

