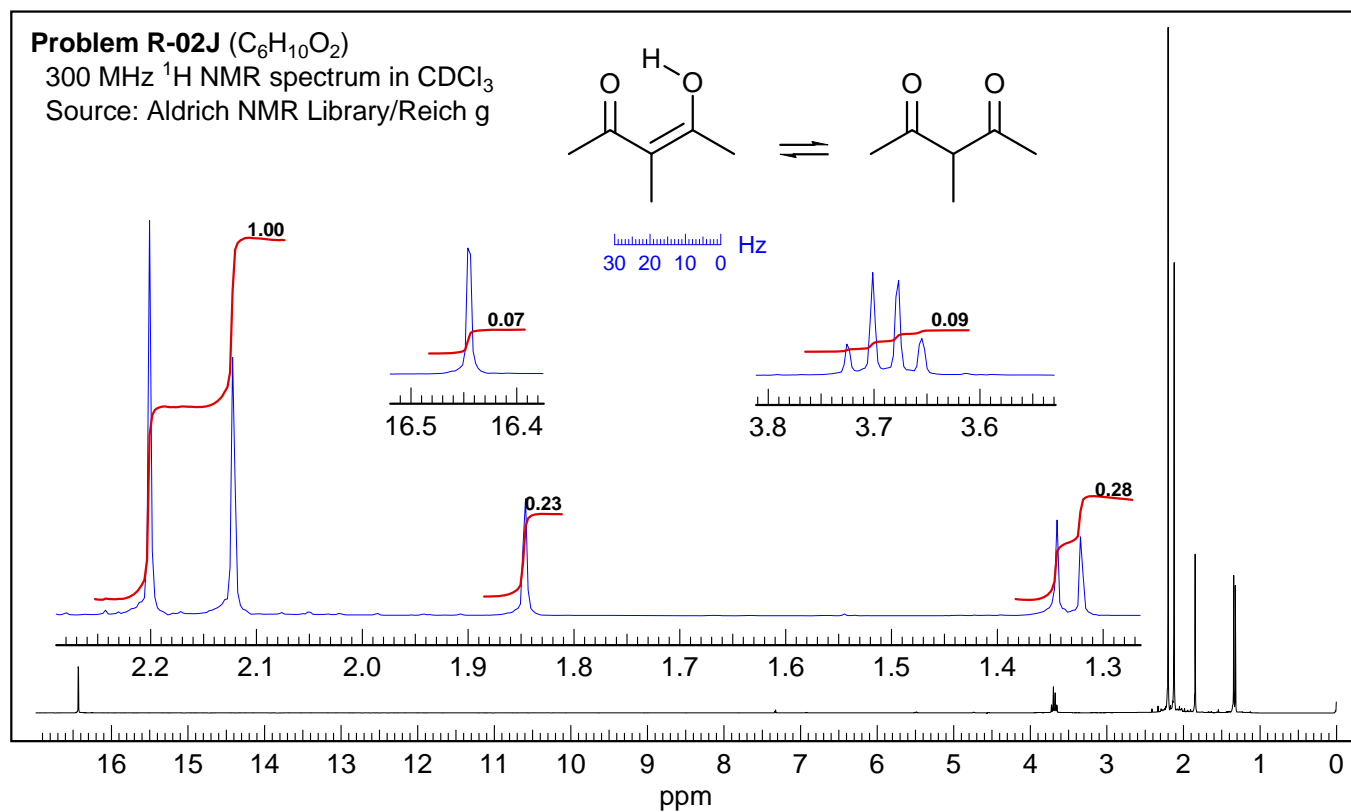
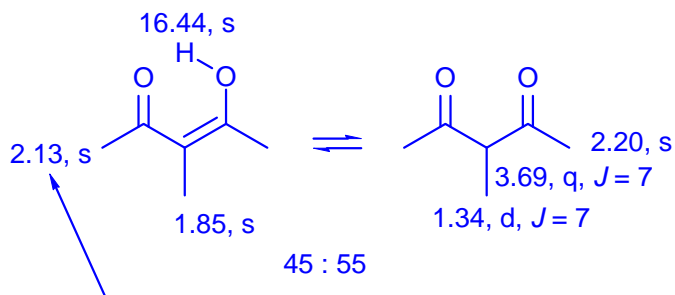
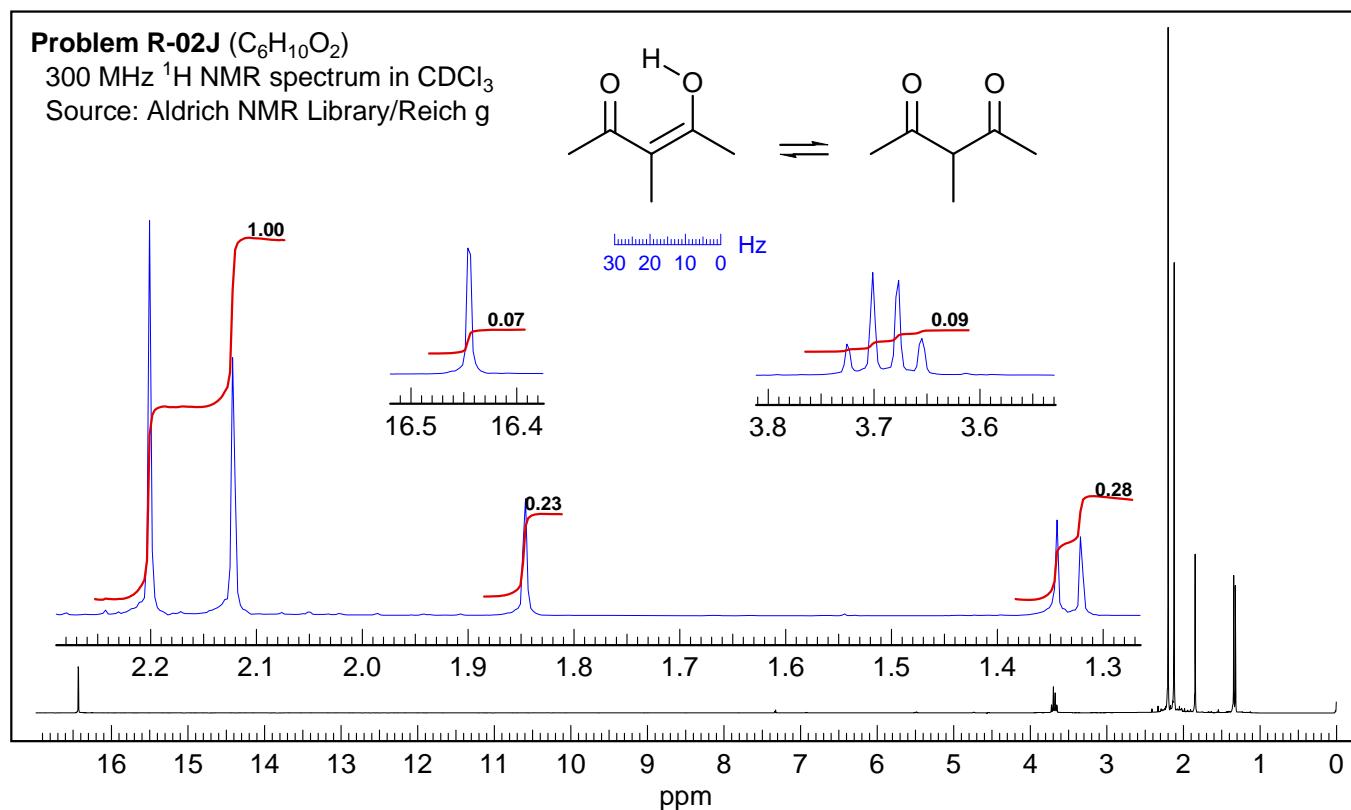


Problem R-02J. Shown below is the 300 MHz ^1H NMR spectrum of 3-methyl-2,4-pentanedione. Interpret the spectrum and assign all peaks



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The integrations of the peaks at 2.13 and 2.20 favor assignment of the methyl protons as shown (2.13 is the enol isomer). This is also consistent with the observation that both CH_3 groups in this tautomer were substantially broadened (see the peak heights), presumably there is a 5J homoallylic coupling between them.