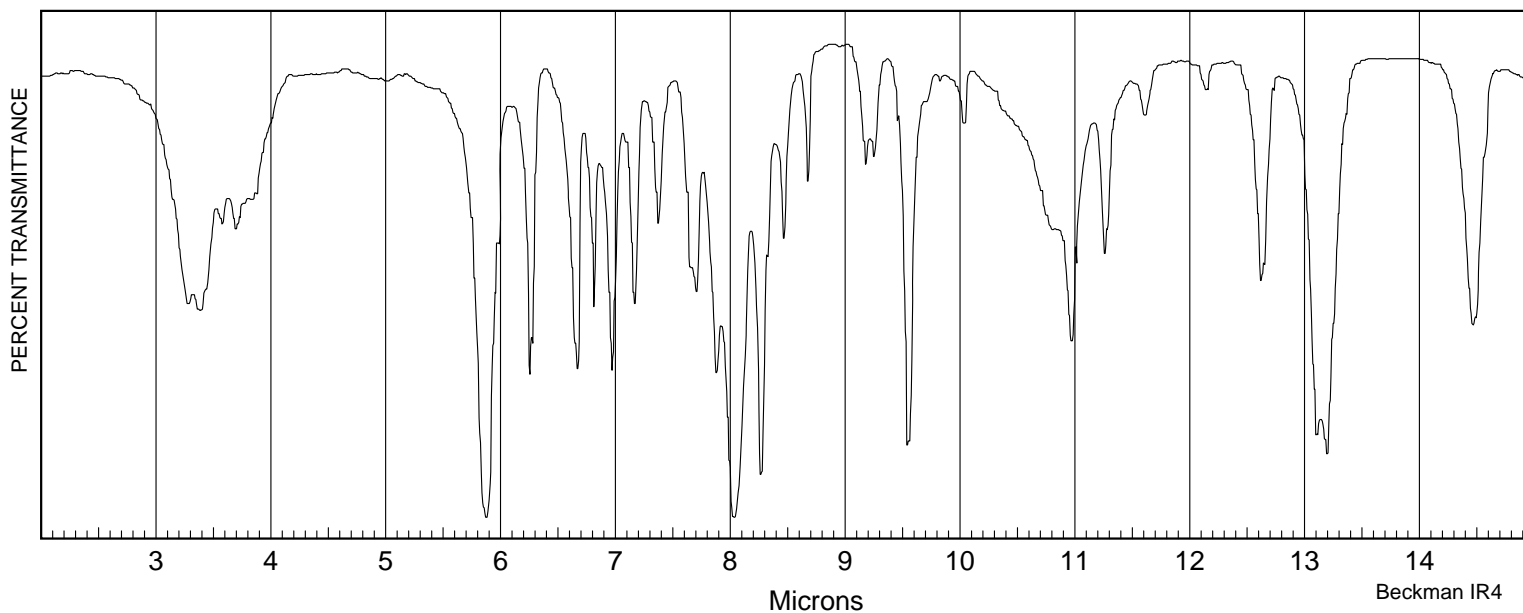


Problem Set 2

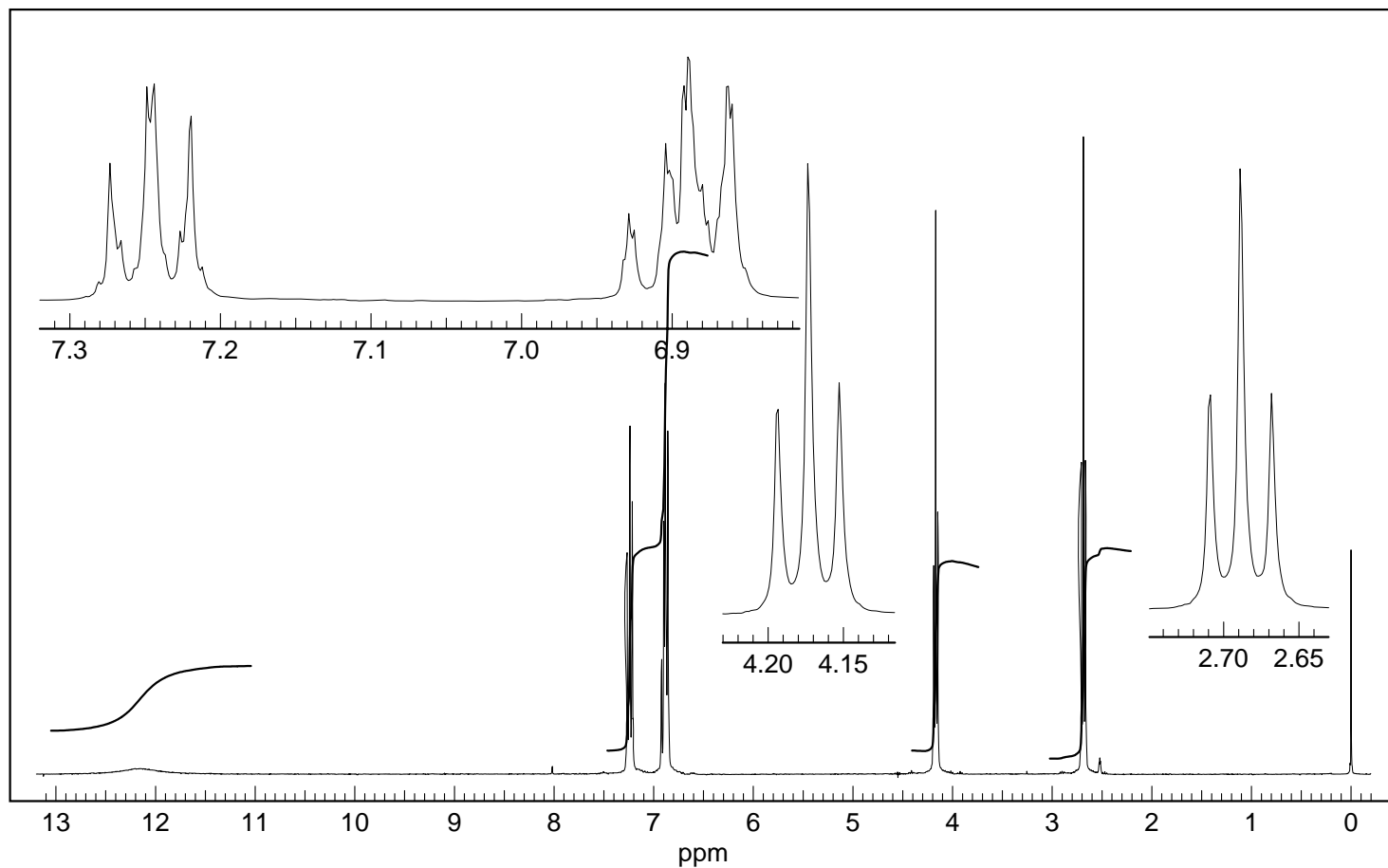
Problem N-80-1

- a. DBE_____
- b. Identify IR peaks. Give functionality by marking them on the spectrum.

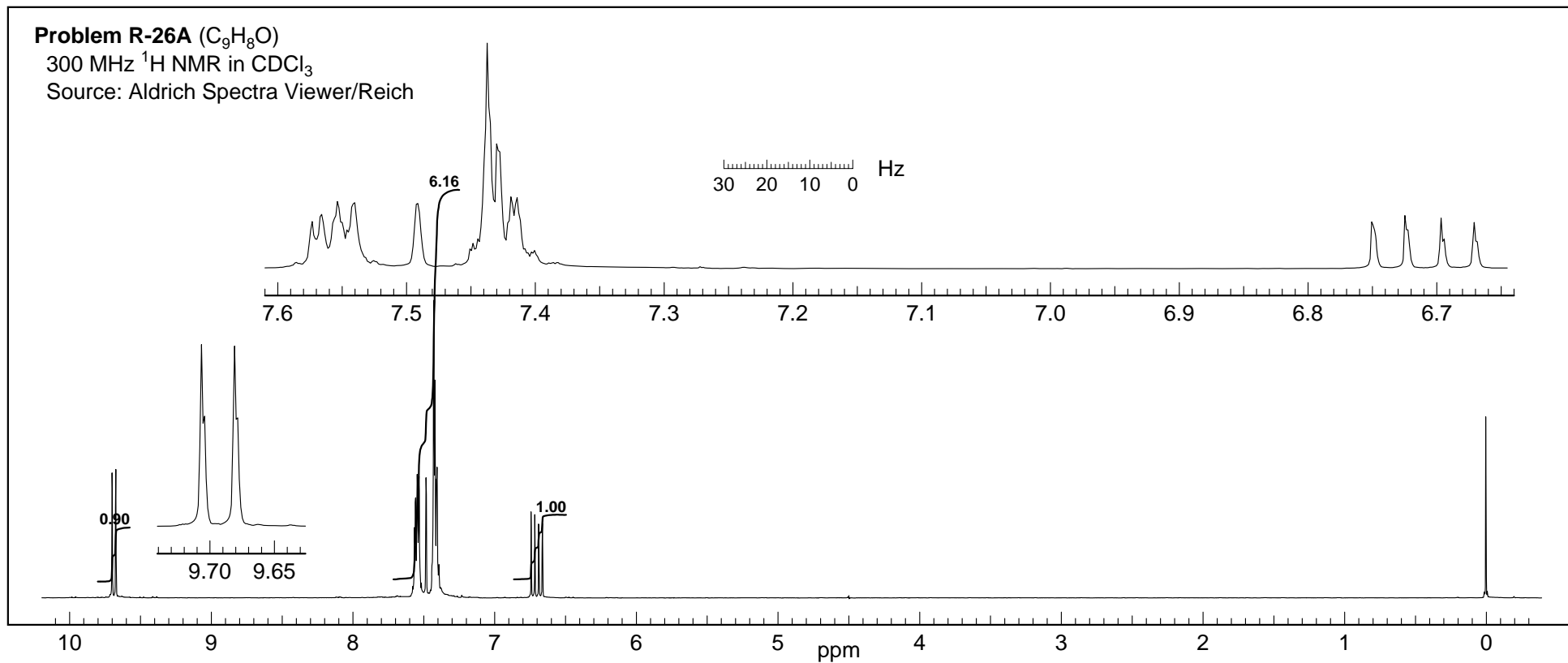


- c. Identify fragments from the ^1H NMR spectrum.

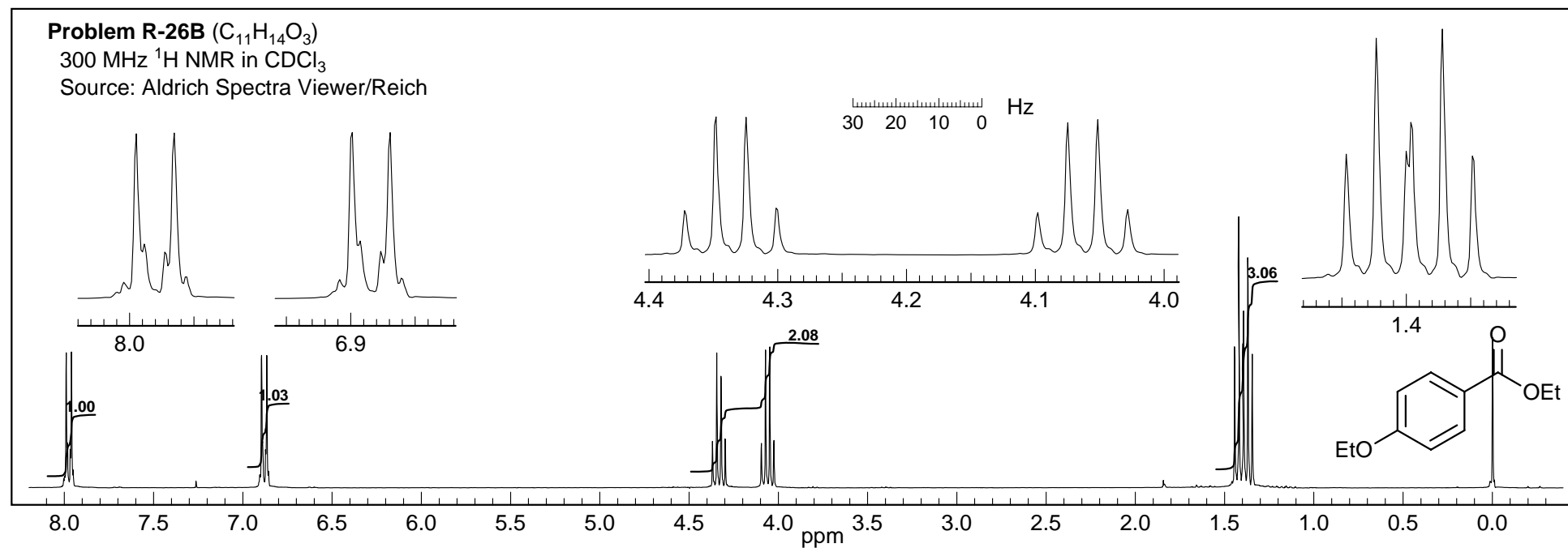
Problem N-80-1 $\text{C}_9\text{H}_{10}\text{O}_3$
300 MHz ^1H NMR spectrum in $\text{CDCl}_3/\text{DMSO}-d_6$
Source: Aldrich Spectra Viewer/Reich



Problem R-26A (C_9H_8O)
 300 MHz 1H NMR in $CDCl_3$
 Source: Aldrich Spectra Viewer/Reich

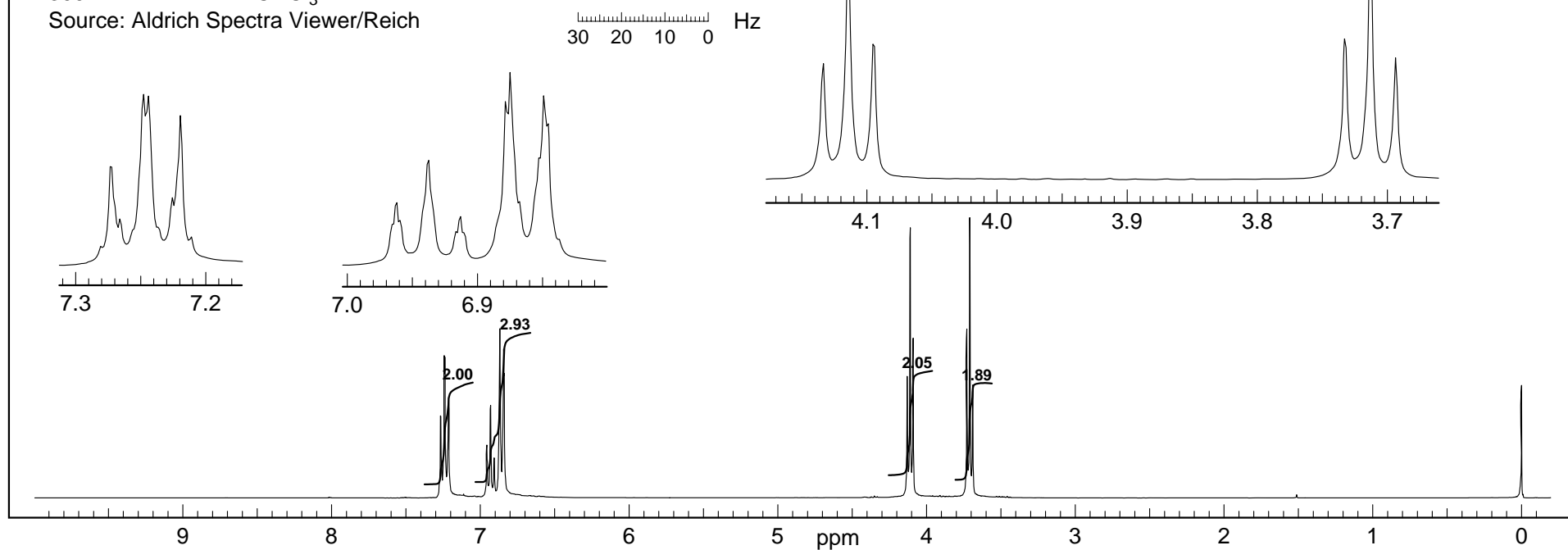


Problem R-26B ($C_{11}H_{14}O_3$)
 300 MHz 1H NMR in $CDCl_3$
 Source: Aldrich Spectra Viewer/Reich

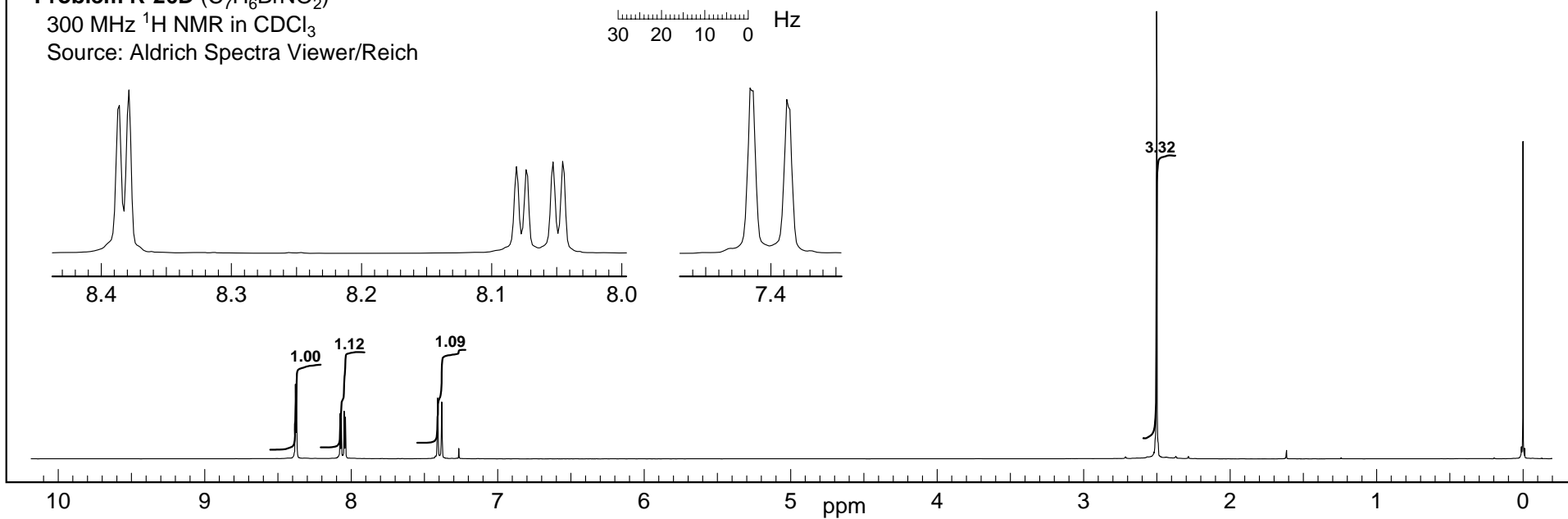


Problem R-26C ($\text{C}_8\text{H}_9\text{ClO}$)300 MHz ^1H NMR in CDCl_3

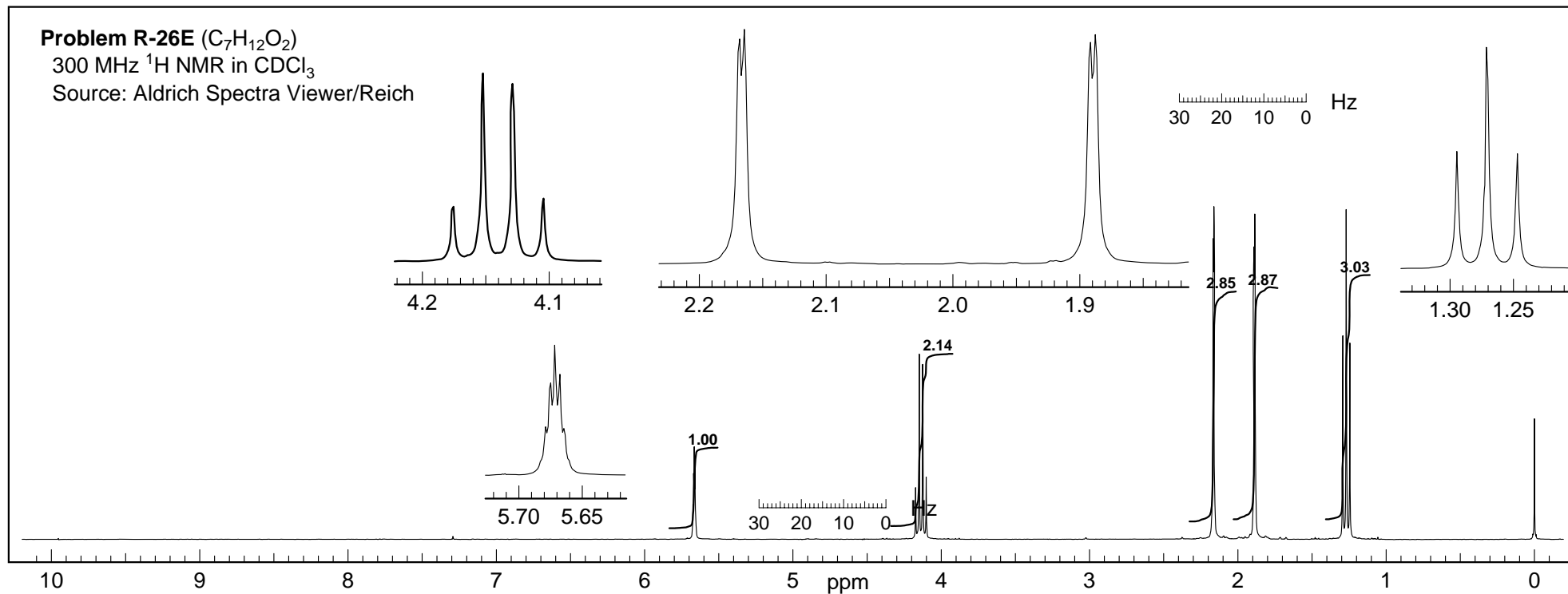
Source: Aldrich Spectra Viewer/Reich

**Problem R-26D** ($\text{C}_7\text{H}_6\text{BrNO}_2$)300 MHz ^1H NMR in CDCl_3

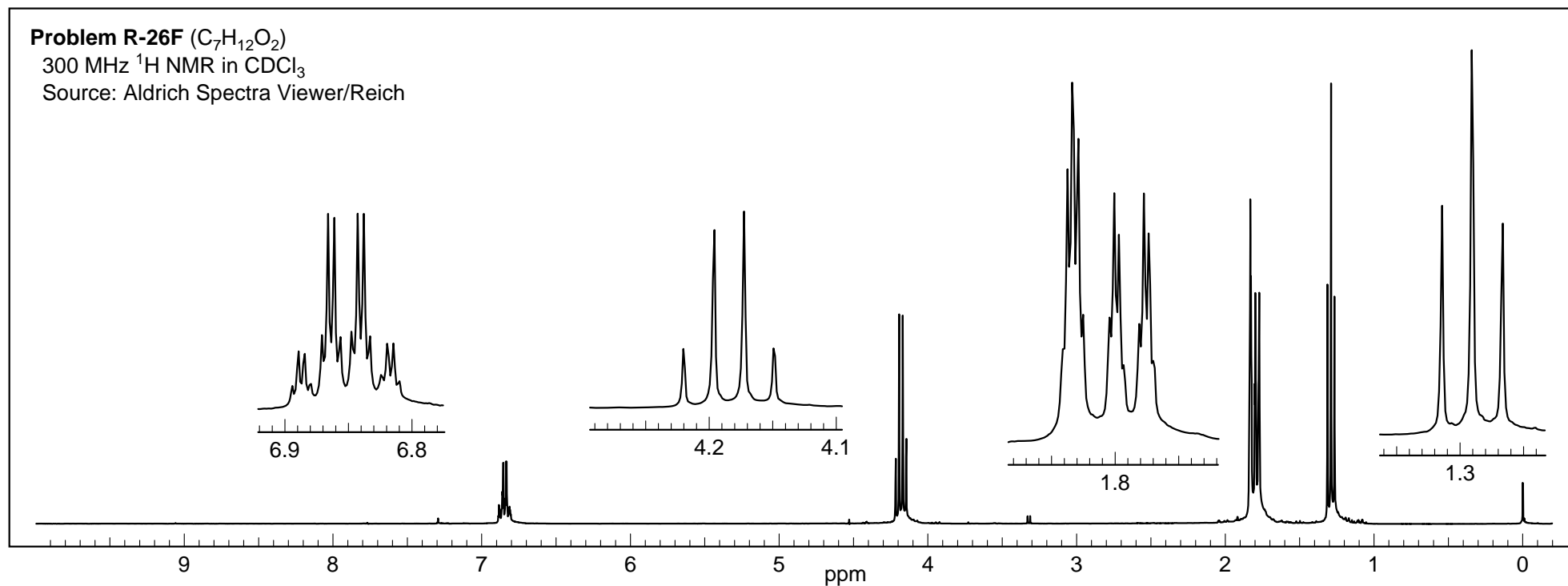
Source: Aldrich Spectra Viewer/Reich



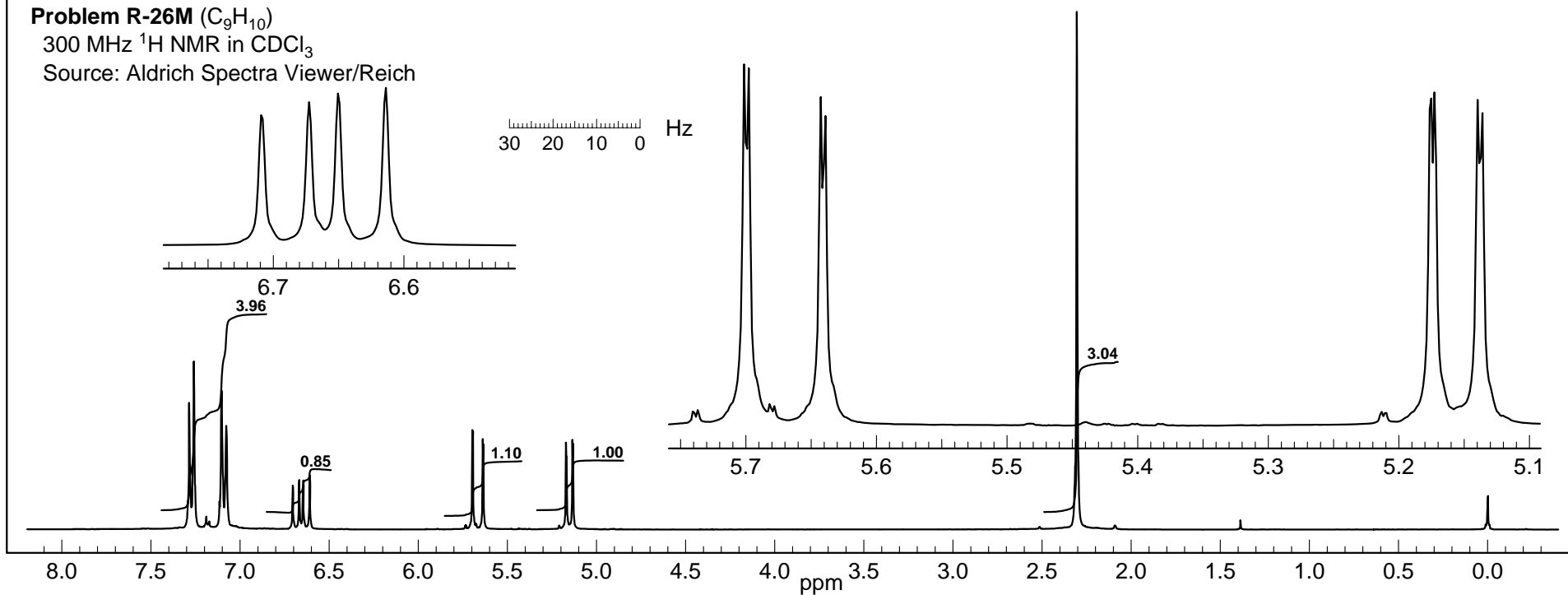
Problem R-26E ($C_7H_{12}O_2$)
 300 MHz 1H NMR in $CDCl_3$
 Source: Aldrich Spectra Viewer/Reich



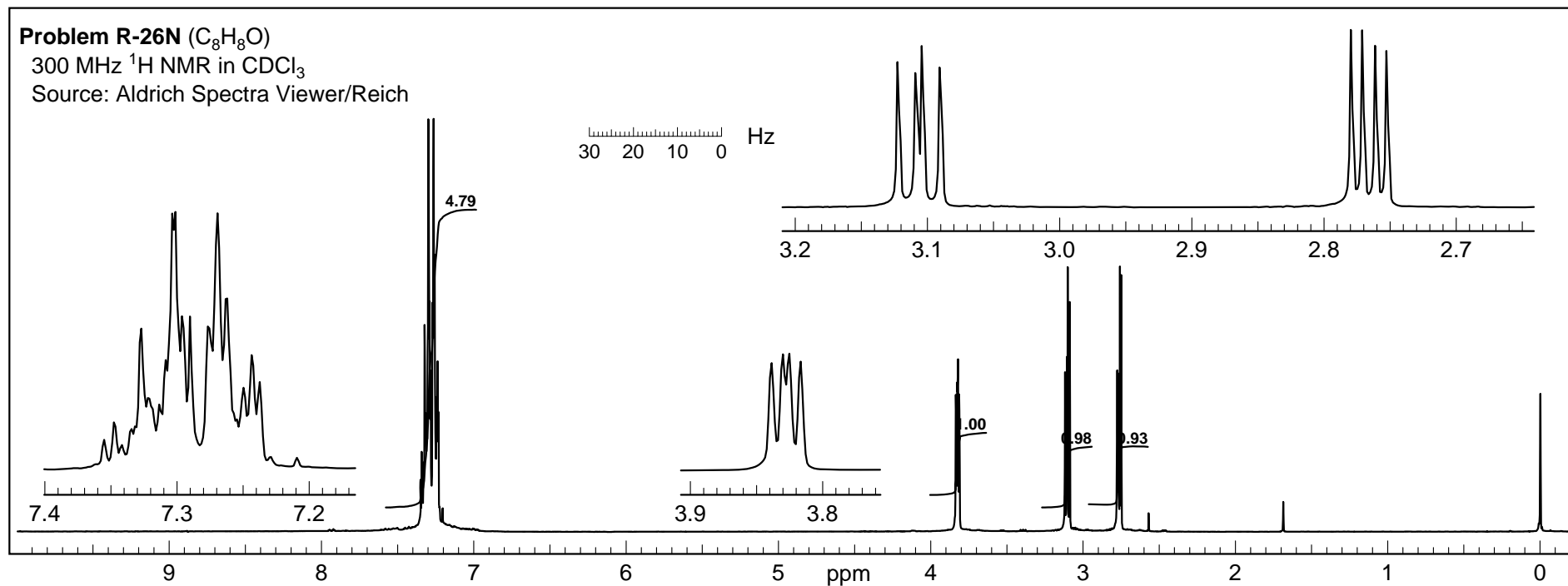
Problem R-26F ($C_7H_{12}O_2$)
 300 MHz 1H NMR in $CDCl_3$
 Source: Aldrich Spectra Viewer/Reich



Problem R-26M (C_9H_{10})
 300 MHz 1H NMR in $CDCl_3$
 Source: Aldrich Spectra Viewer/Reich



Problem R-26N (C_8H_8O)
 300 MHz 1H NMR in $CDCl_3$
 Source: Aldrich Spectra Viewer/Reich



Problem R-301-A: Extracting J couplings from First Order Spectra

Each pattern is caused by a single proton. Analyze each in terms of J values for protons splitting the ones observed, and report in the standard fashion (eg, tdt, $J = 12, 3, 2$ Hz). Draw a "coupling tree."

