

Figure 12.10 NMR data for bicyclo[2.2.1]hept-5-ene-endo-2,3-dicarboxylic anhydride (CDCl₃).

- (a) 1H NMR spectrum (300 MHz).
- **(b)** 13C NMR data: δ 47.6, 53.5, 136.1, 171.9.

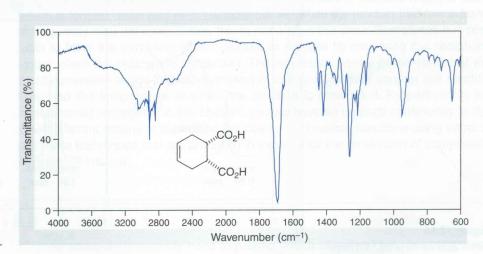


Figure 12.11
IR spectrum of 4-cyclohexene-cis-1,2-dicarboxylic acid (IR card).

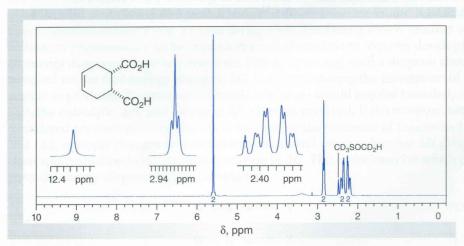


Figure 12.12 NMR data for 4-cyclohexenecis-1,2-dicarboxylic acid (DMSO-d₆).

- (a) 1 H NMR spectrum (300 MHz).
- **(b)** 13 C NMR data: δ 25.9, 39.2, 125.2, 174.9.