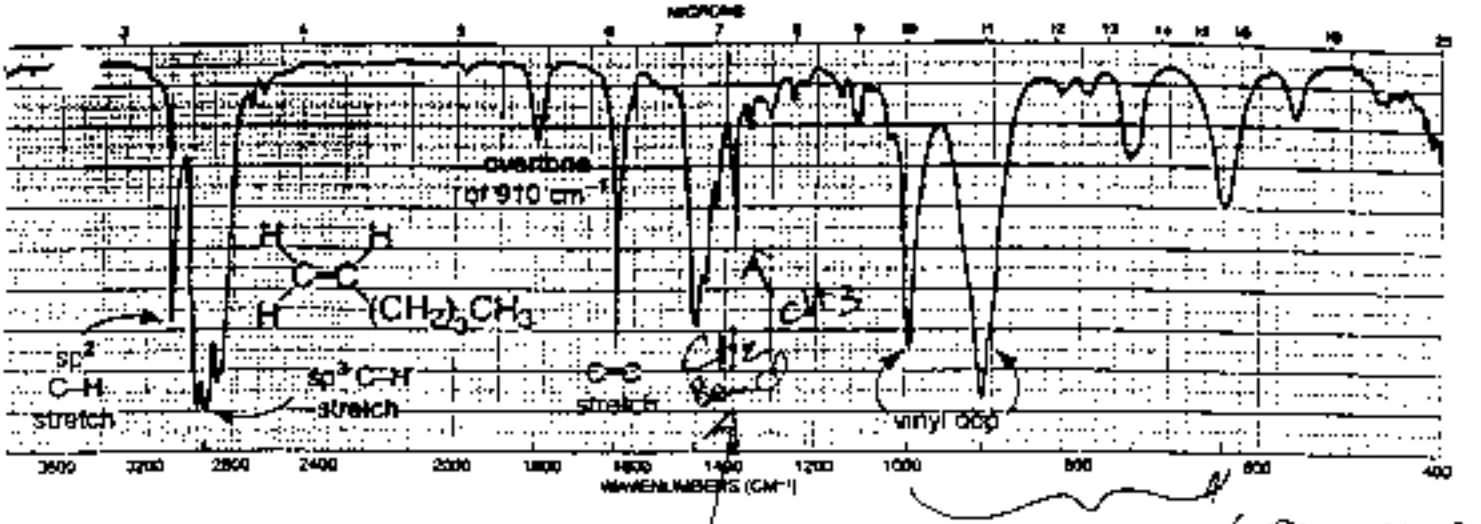


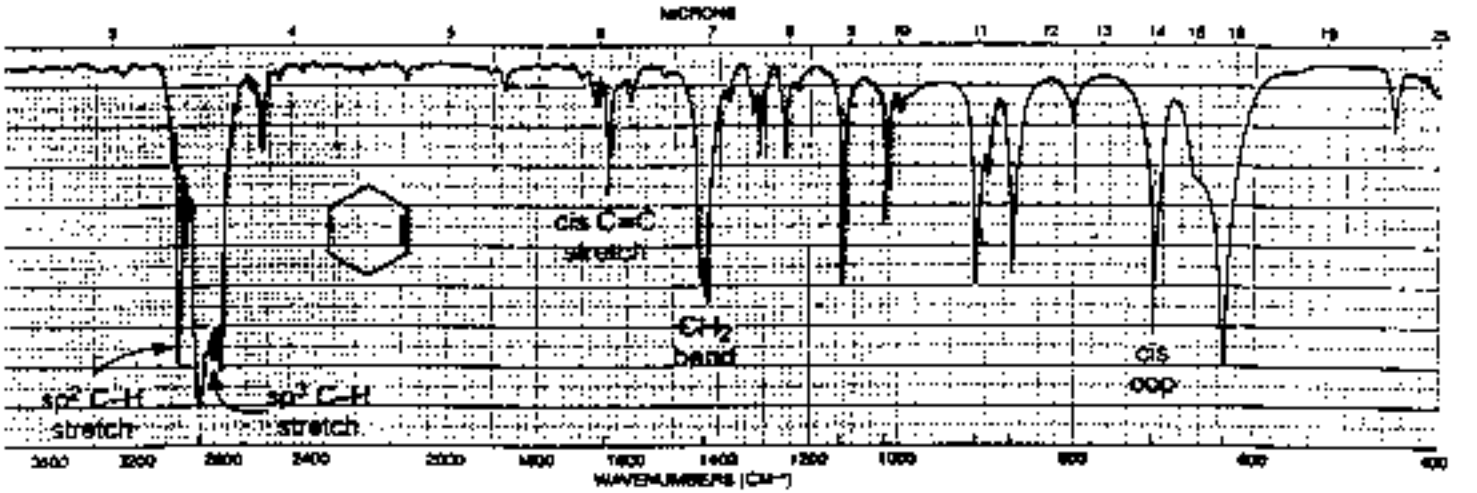
► FIGURE 2.10 The infrared spectrum of 1-hexene (neat liquid, KBr plates).

sp² above 3000

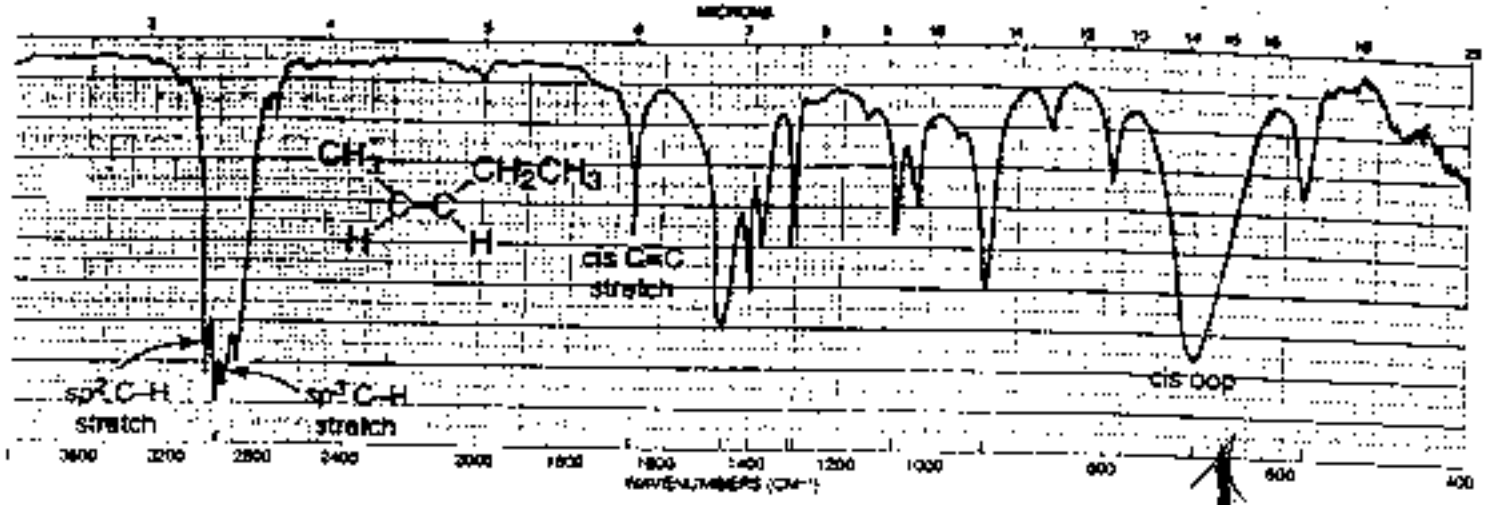
C=C ~1650

oop bending

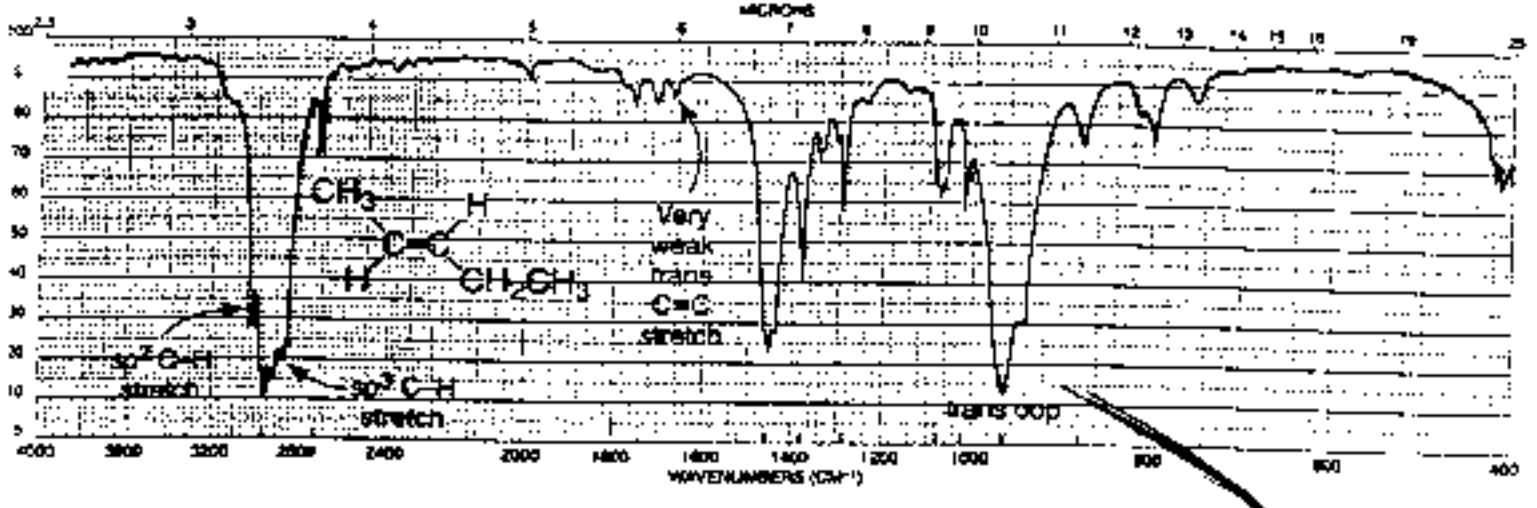
650 - 1000



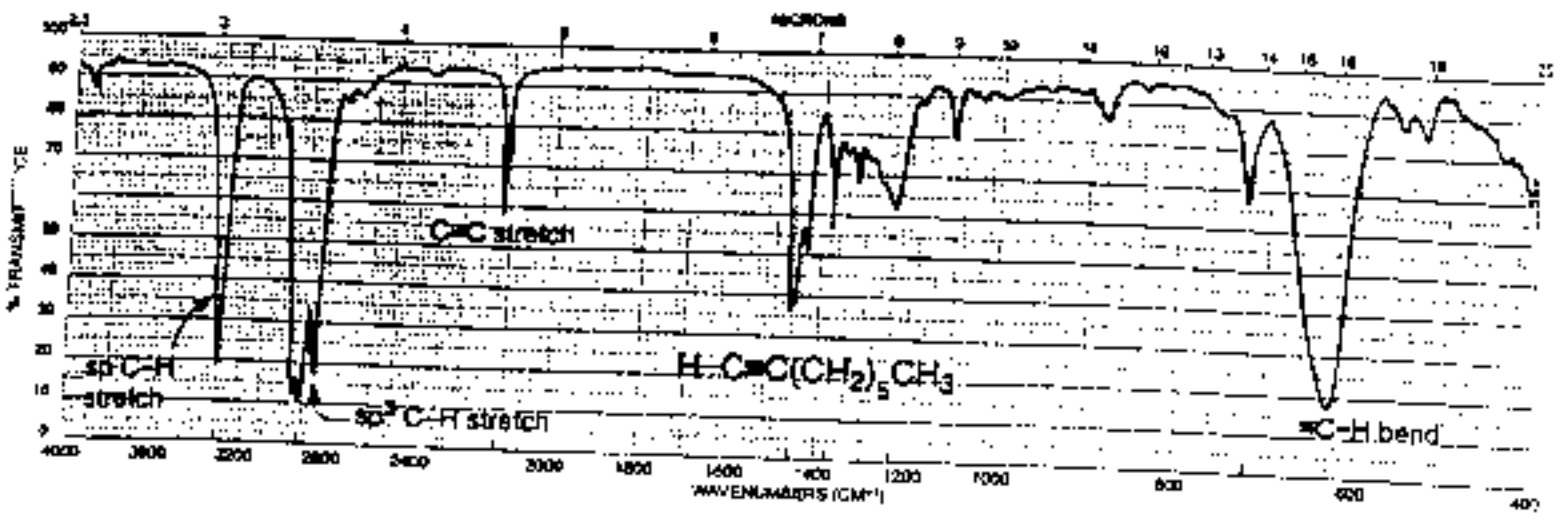
► FIGURE 2.11 The infrared spectrum of cyclohexene (neat liquid, KBr plates).



► **FIGURE 2.12** The infrared spectrum of *cis*-2-pentene (neat liquid, KBr plates).



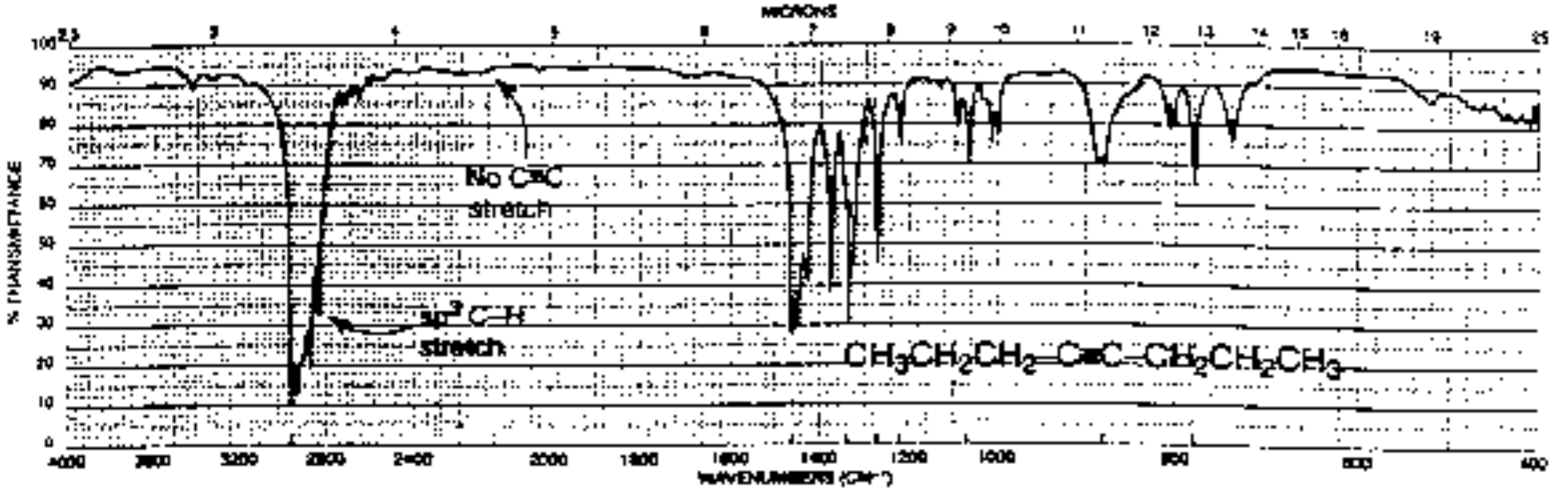
► **FIGURE 2.13** The infrared spectrum of *trans*-2-pentene (neat liquid, KBr plates).



▶ **FIGURE 2.14** The infrared spectrum of 1-octyne (neat liquid, KBr plates).

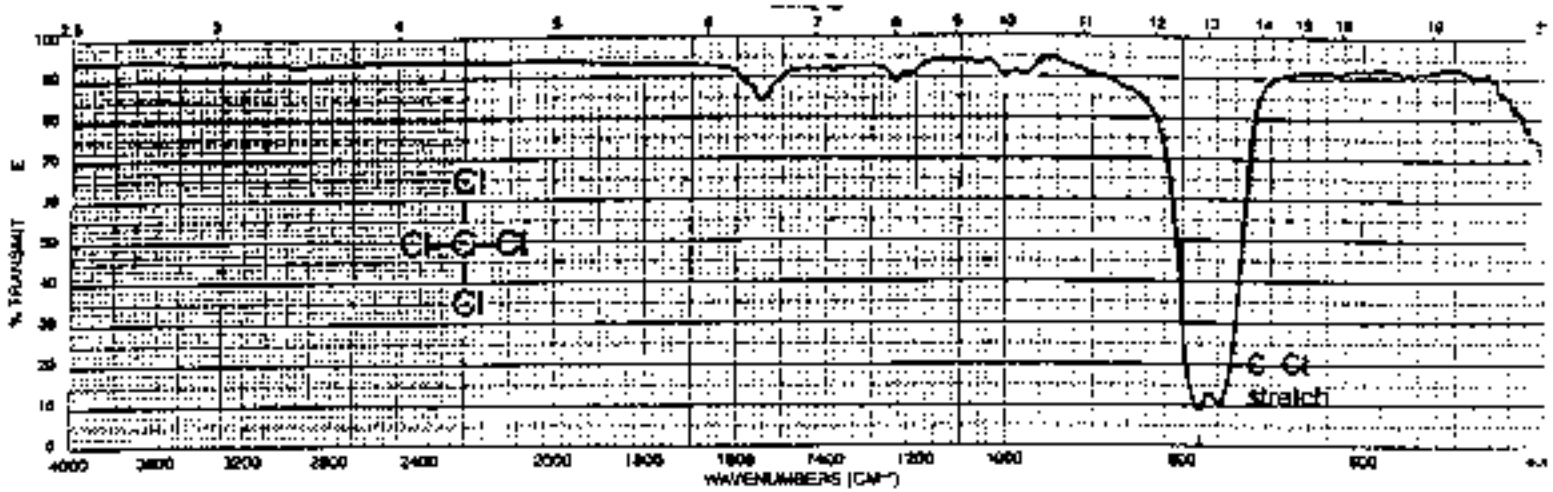
3300

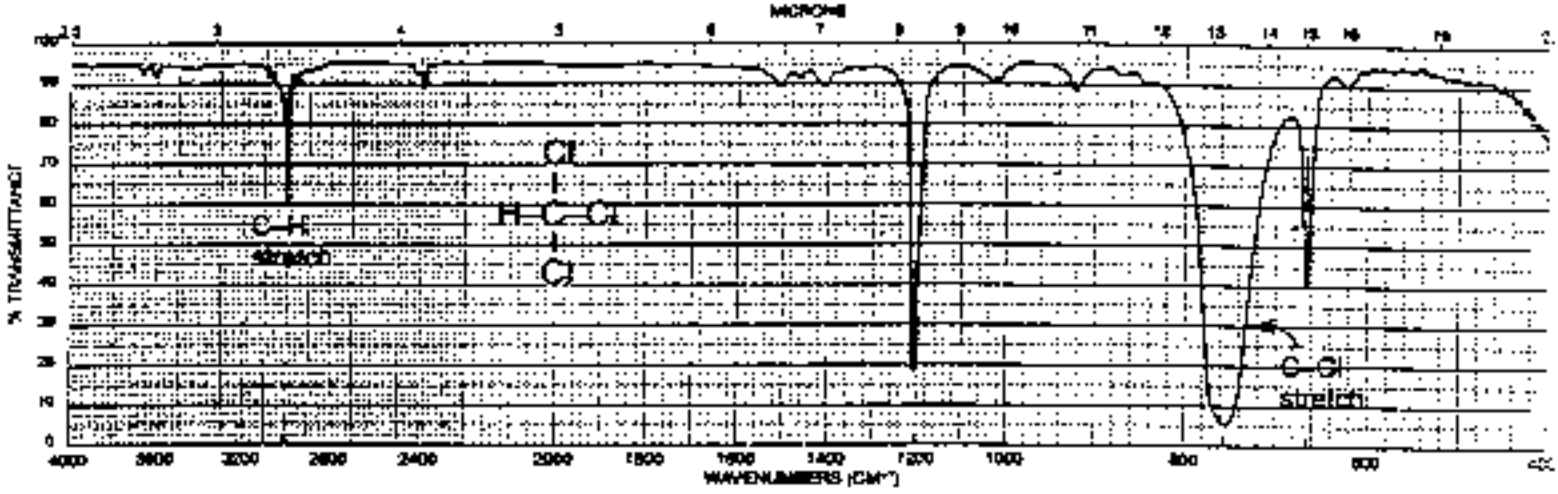
2150



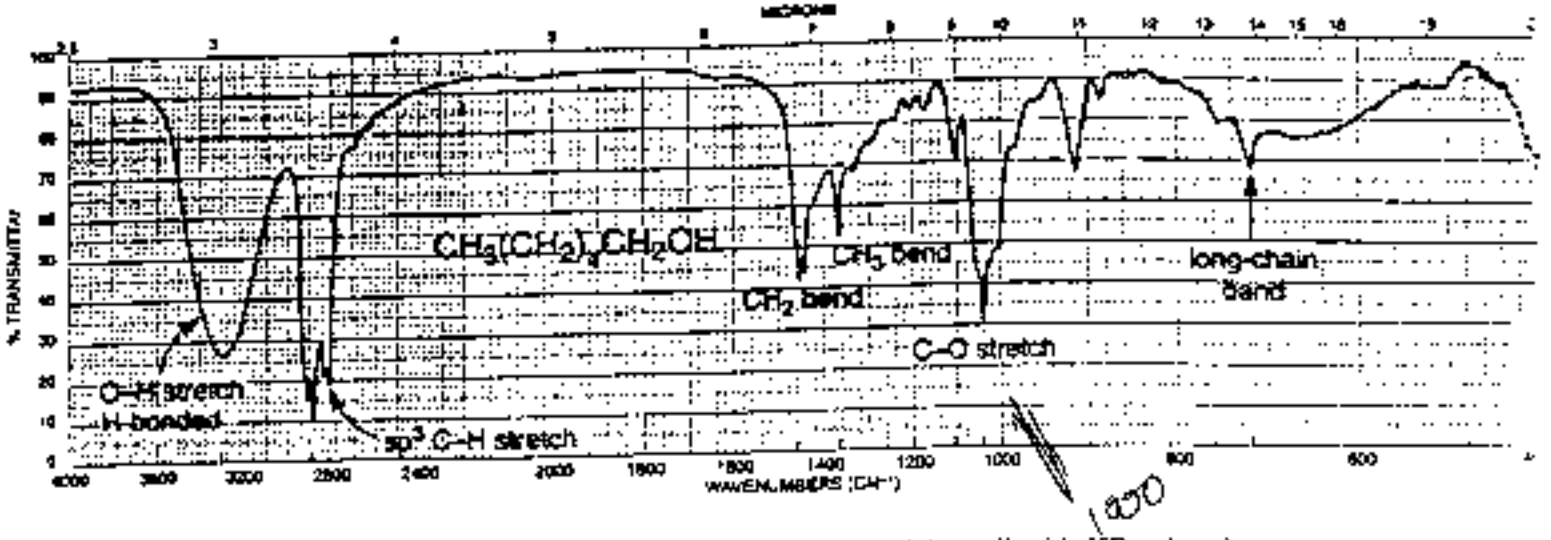
▶ **FIGURE 2.15** The infrared spectrum of 4-octyne (neat liquid, KBr plates).

Symmetrical

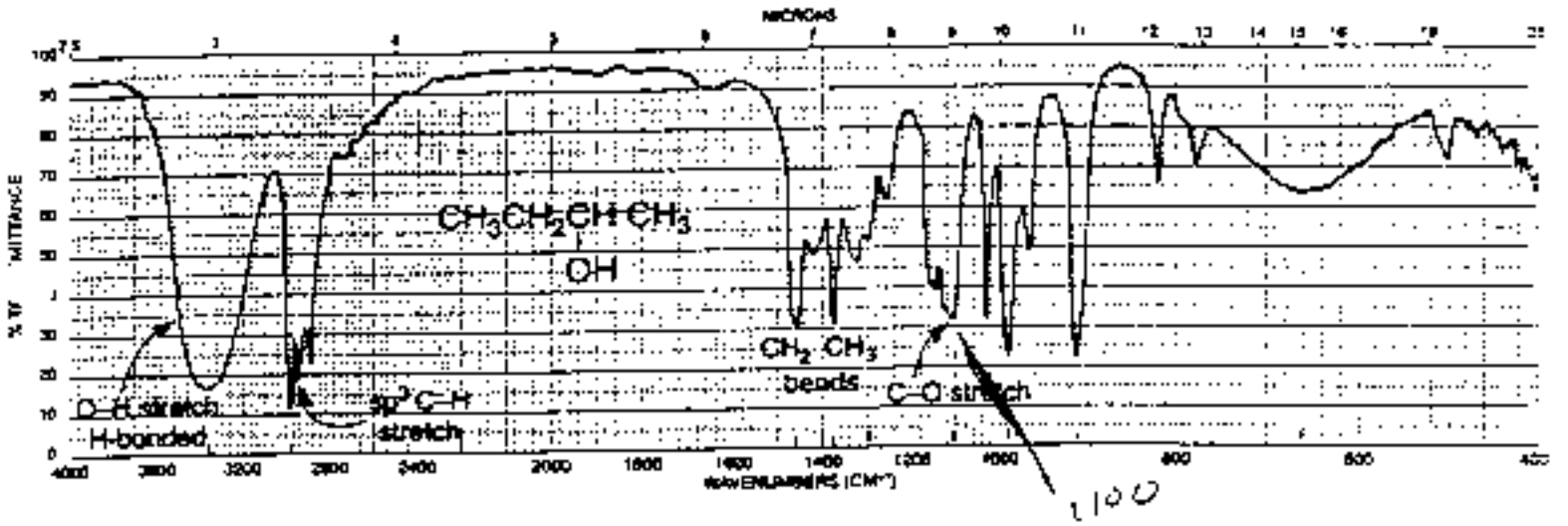

Cl
Cl–C–Cl
Cl
C–Cl
stretch
% TRANSMIT
WAVENUMBERS (CM⁻¹)


MICRONS
Cl
H–C–Cl
Cl
C–H
stretch
C–Cl
stretch
% TRANSMITTANCE
WAVENUMBERS (CM⁻¹)

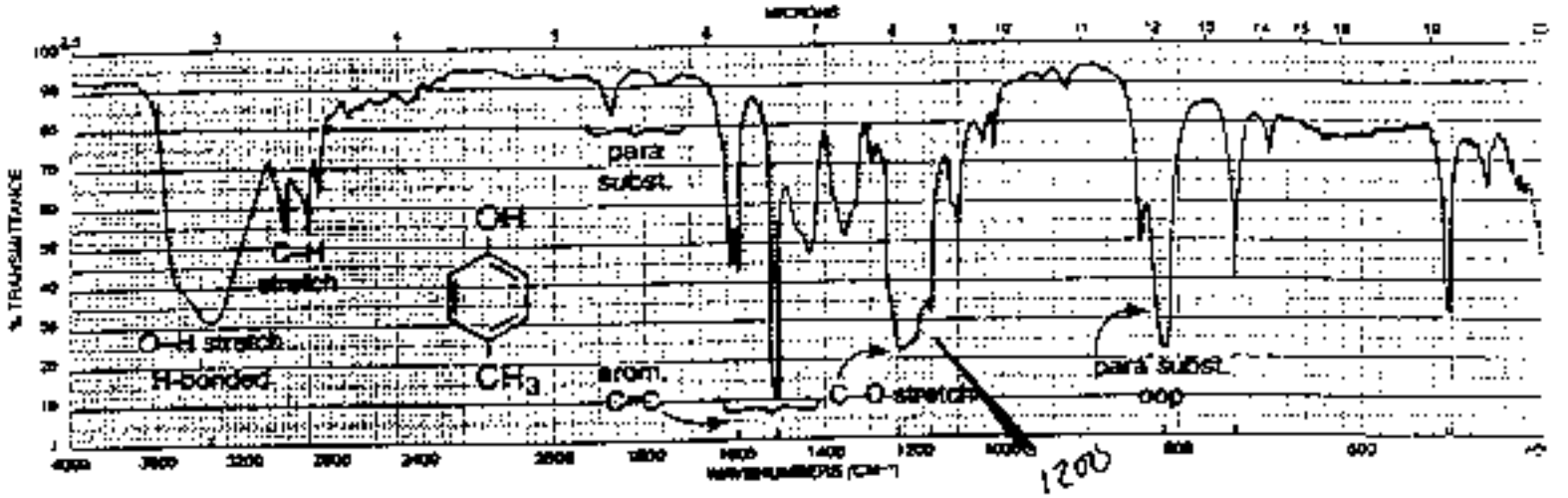
1000 - 1400



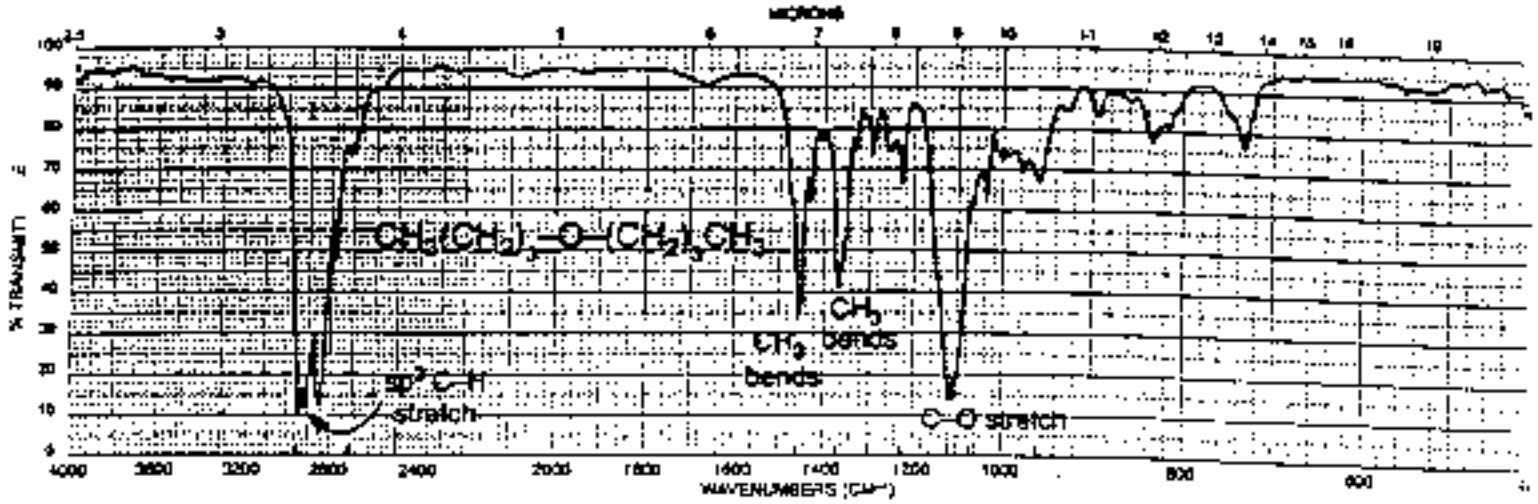
▶ **FIGURE 2.29** The infrared spectrum of 1-hexanol (neat liquid, KBr plates).



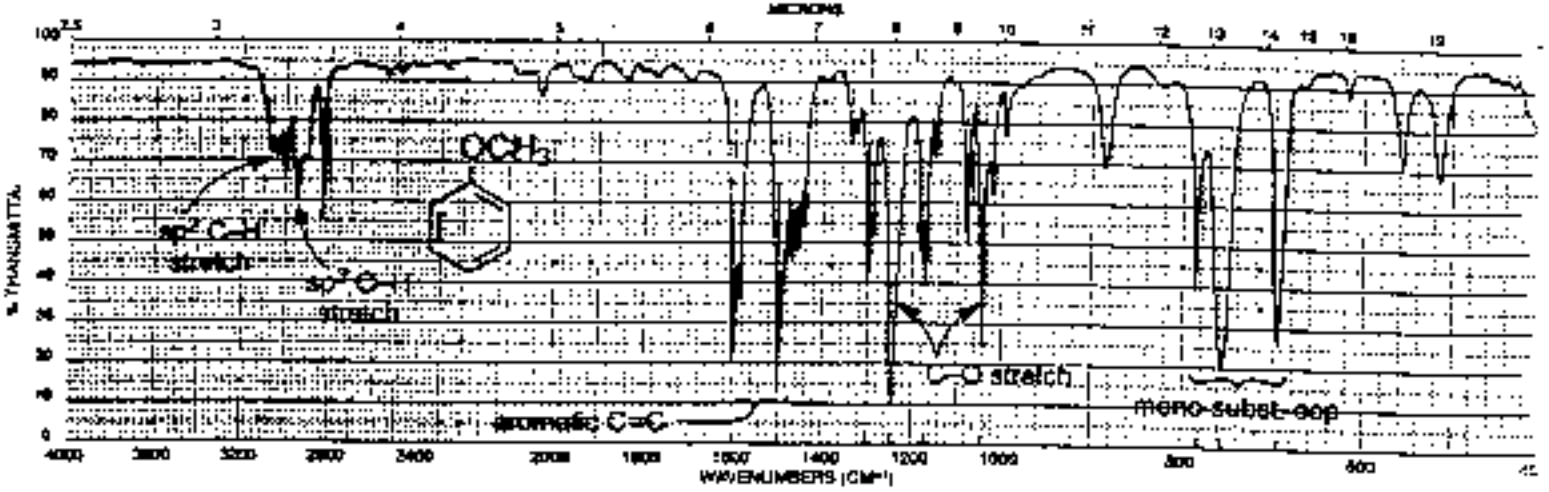
▶ **FIGURE 2.30** The infrared spectrum of 2-butanol (neat liquid, KBr plates).

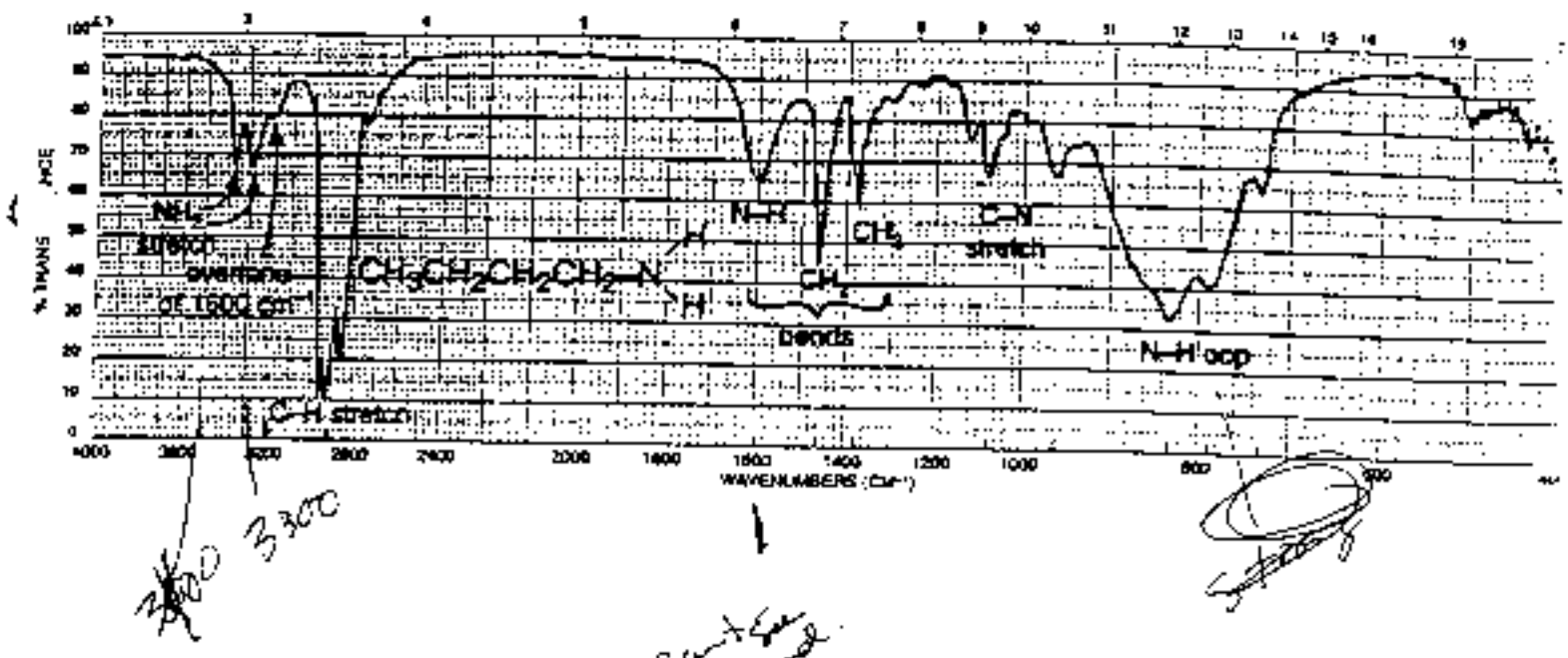


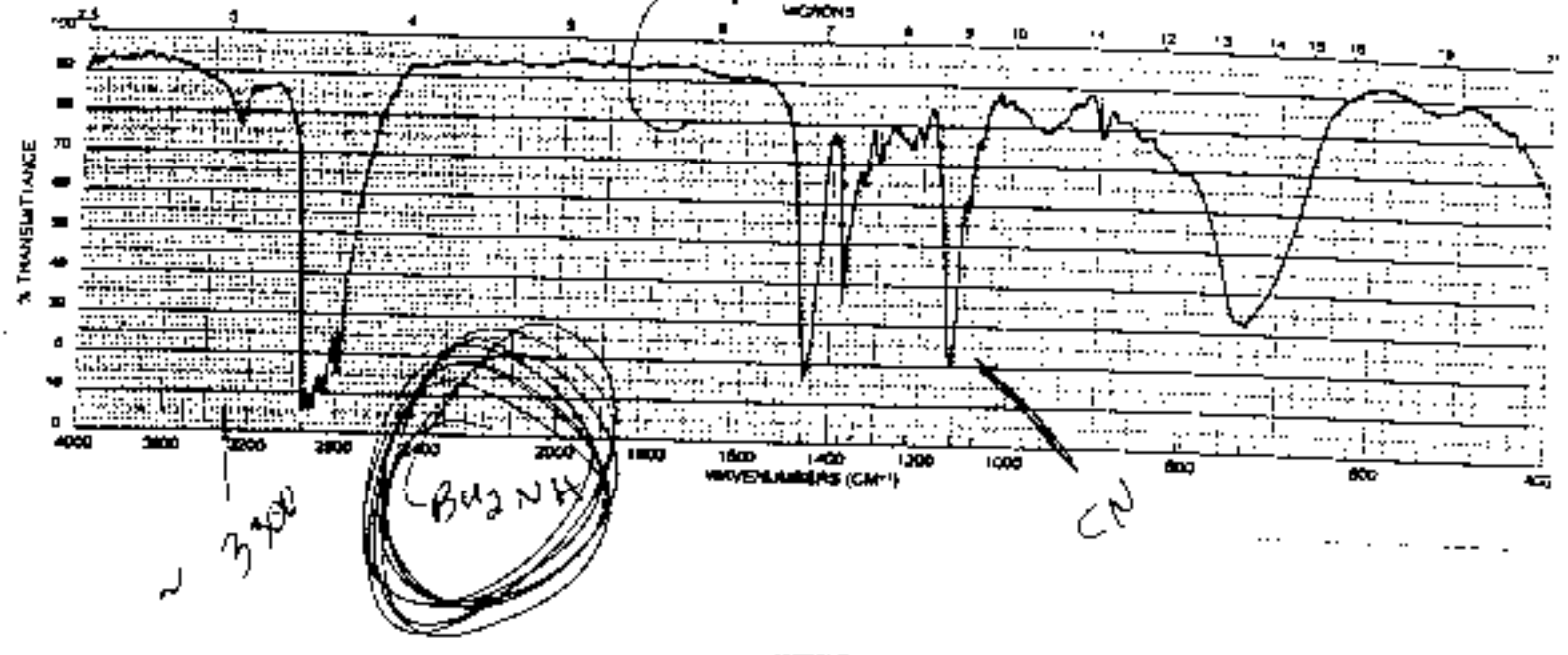
▶ **FIGURE 2.31** The infrared spectrum of *para*-cresol (neat liquid, KBr plates).

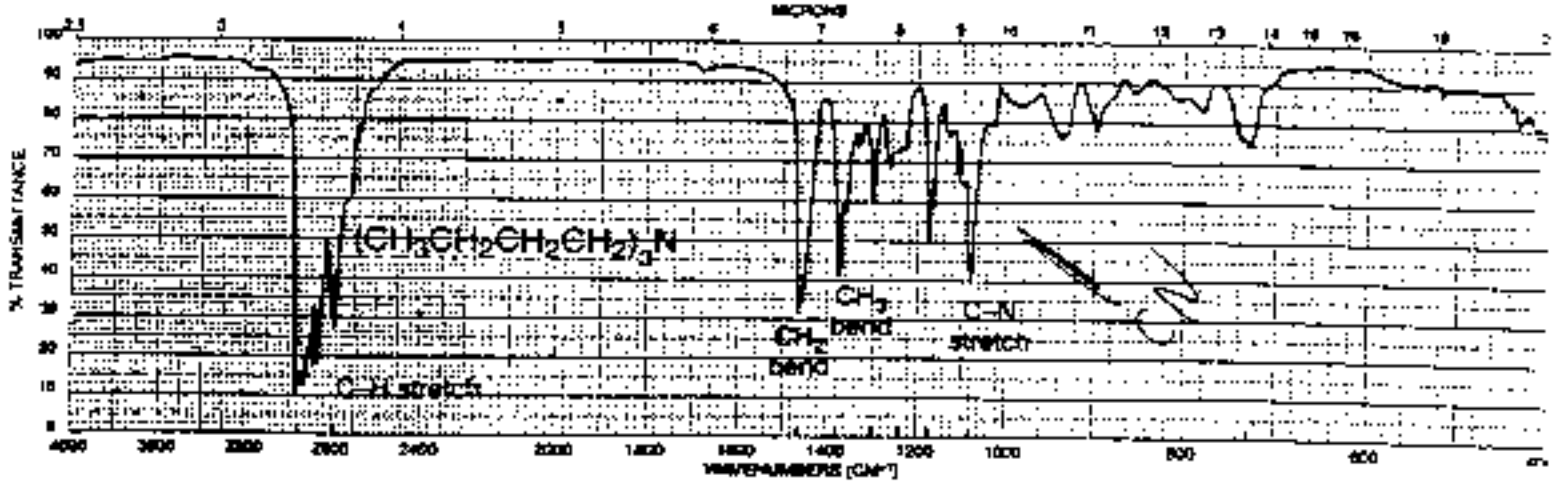


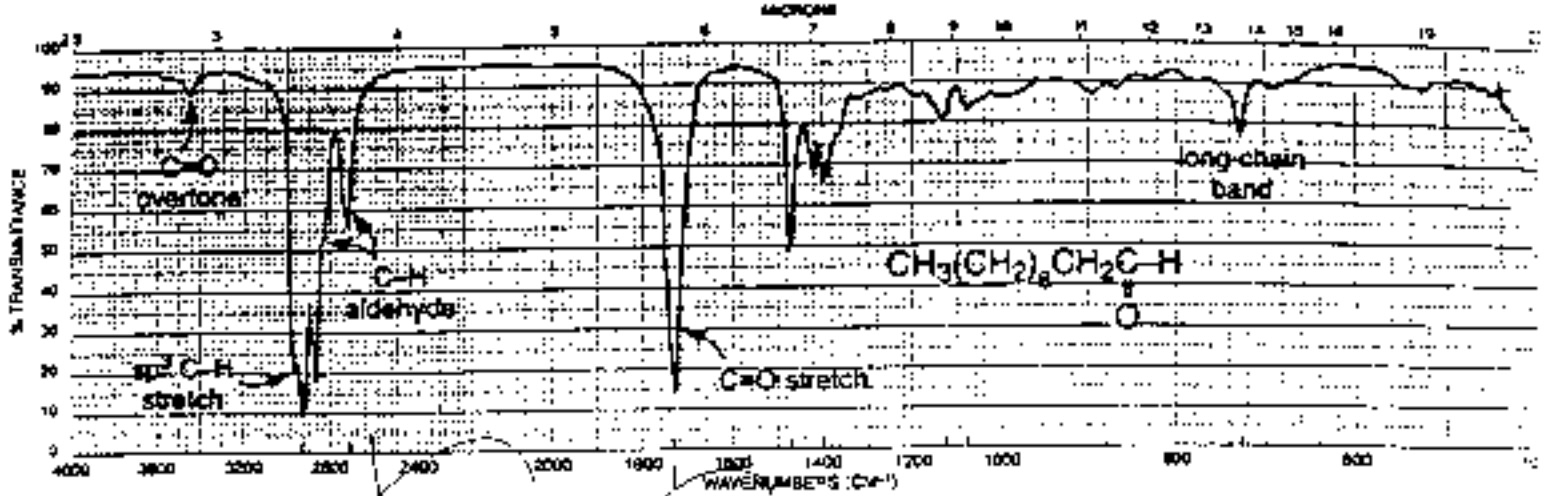
► **FIGURE 2.33** The infrared spectrum of dibutyl ether (neat liquid, KBr plates).

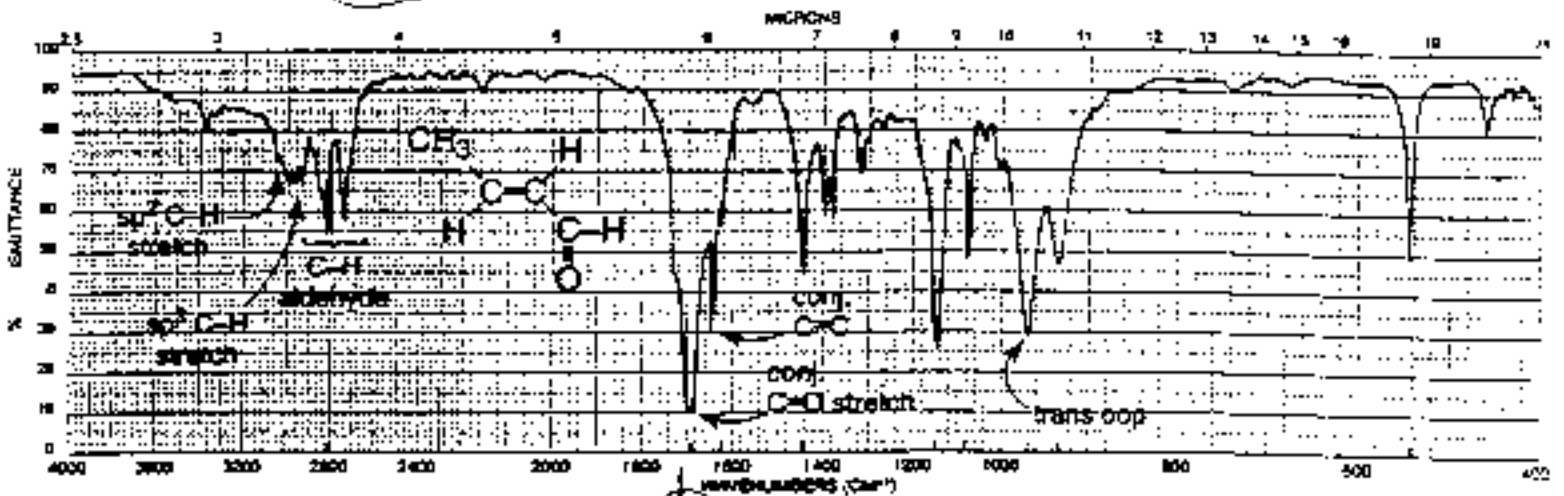



% TRANS
NH2 stretch overtone of 1600 cm-1
C-H stretch
N-H
CH3 bends
C-N stretch
N-H oop
WAVENUMBERS (cm-1)

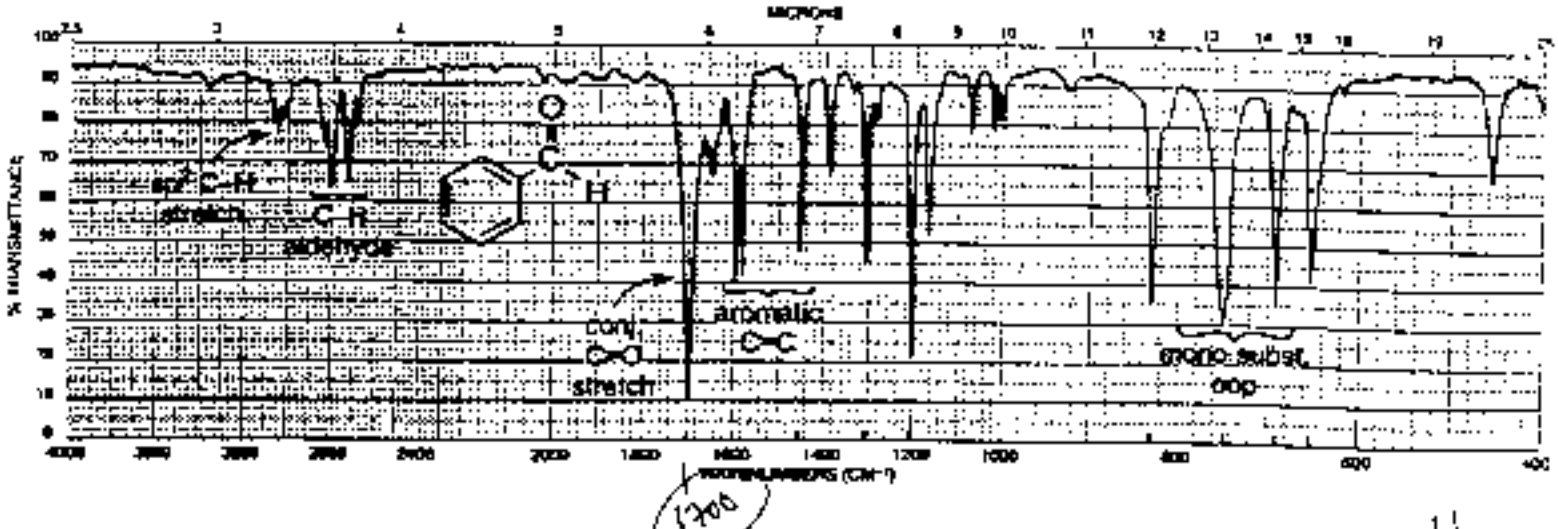

% TRANSMITTANCE
WAVENUMBERS (CM-1)
CN

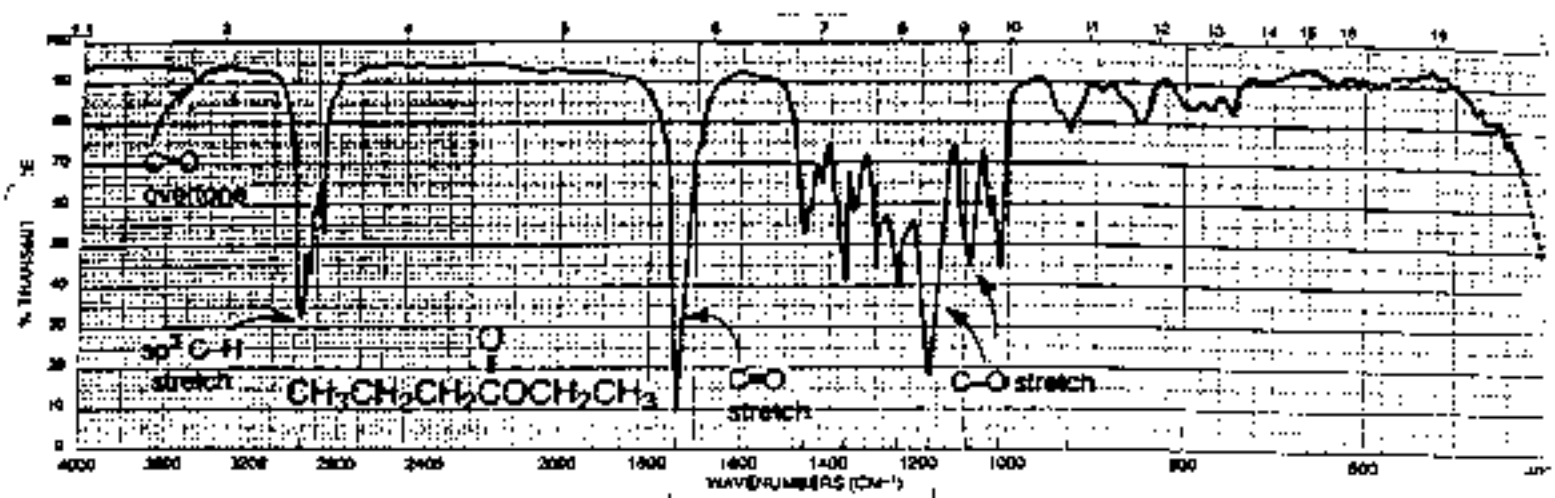

% TRANSMITTANCE
(CH3CH2CH2CH2)3N
CH3 bend
CH2 bend
C-N stretch
C-H stretch
WAVENUMBERS (CM-1)



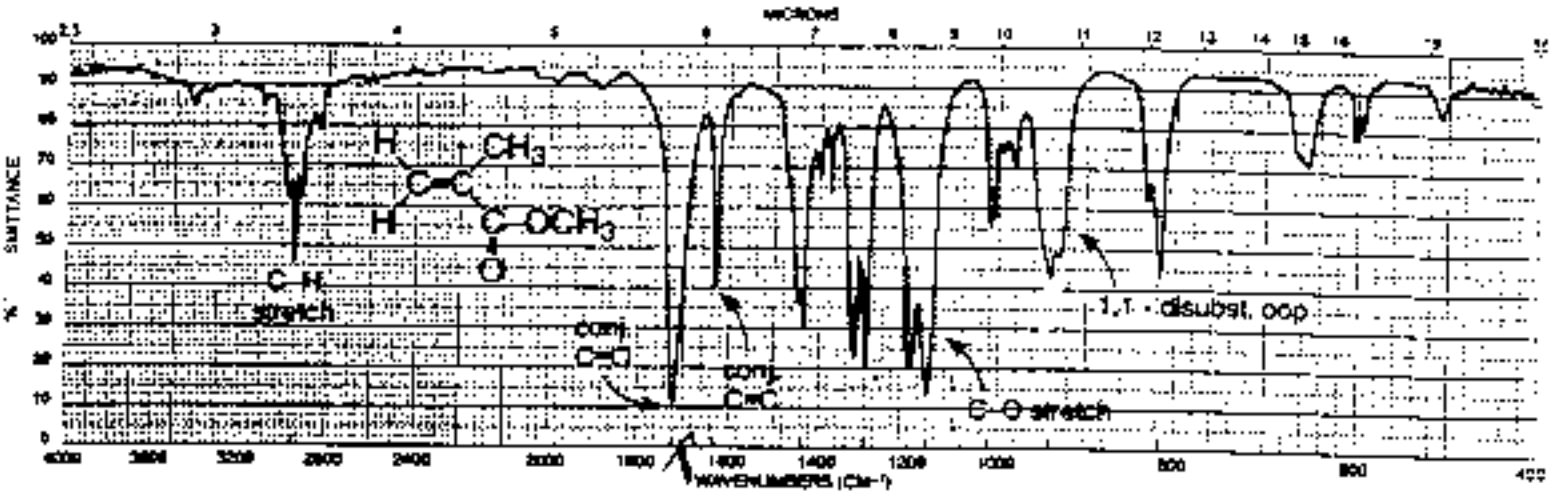


► **FIGURE 2.37** The infrared spectrum of crotonaldehyde (neat liquid, KBr plates).

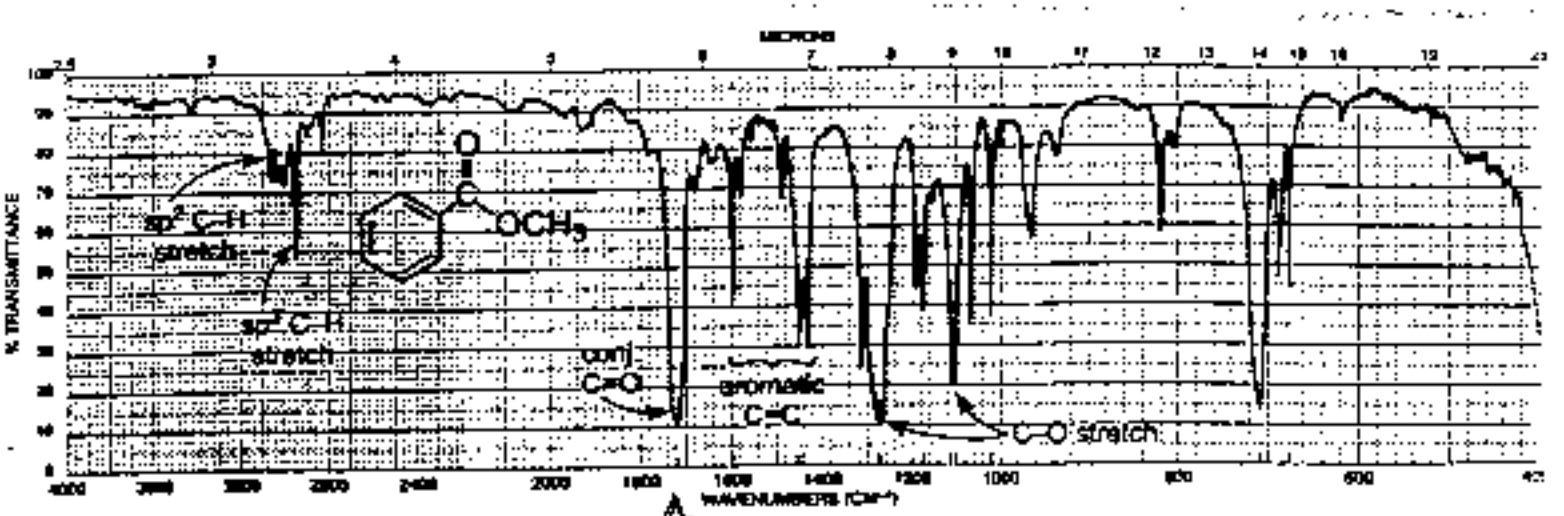




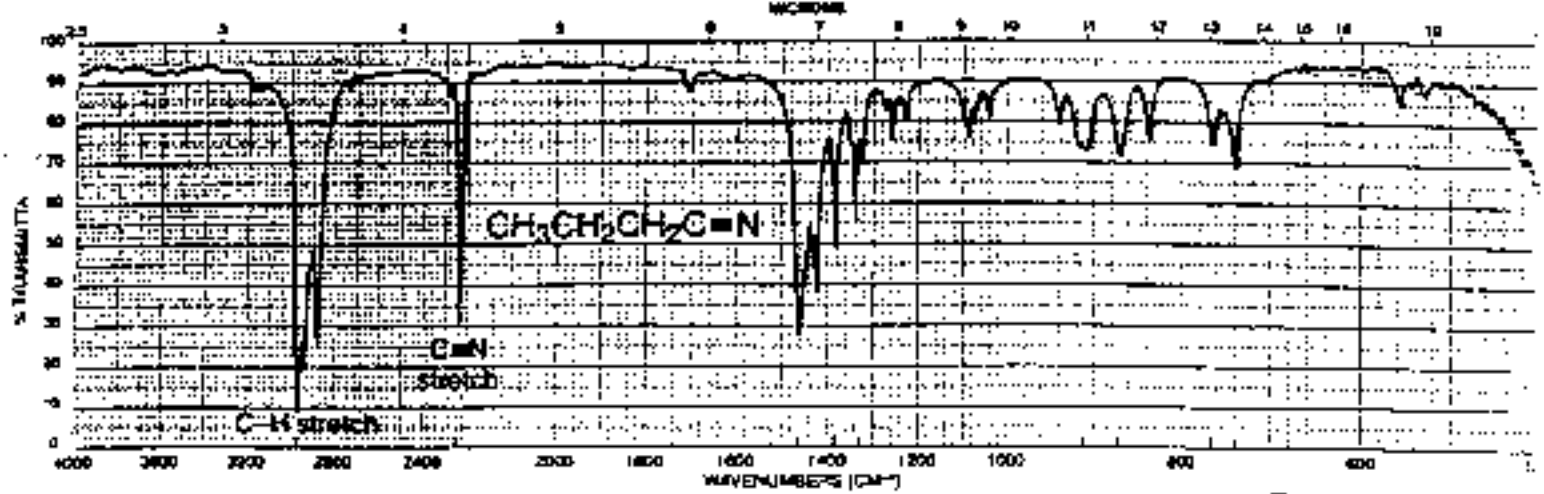
1740 1190



1725



1720



1
2250

C≡N 2250