

Infra Red Spectroscopy

Pre-lesson assignment – Textbook Pg 250-4

Define the following terms

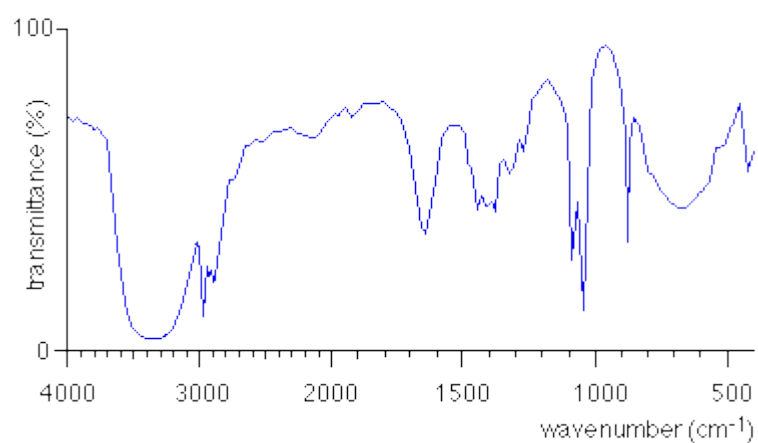
- Wavenumber
- Fingerprint region
- Infrared Spectroscopy

Make notes on mass spectrometry

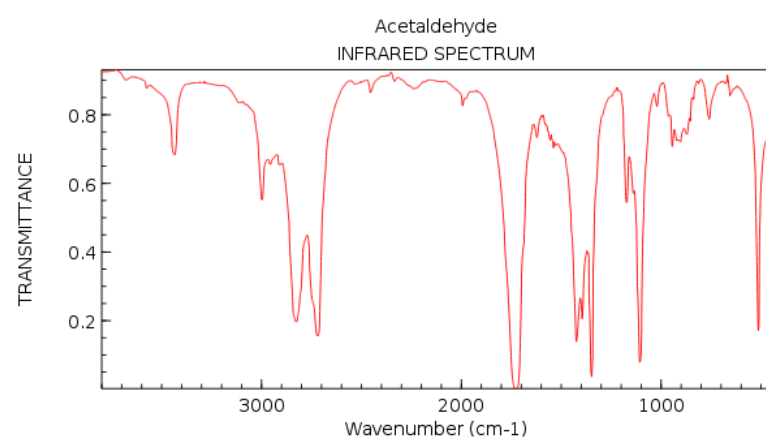
Use the following questions as a guide

1. How does infrared radiation affect covalent bonds? Discuss
 - a. The way that the bonds can change.
 - b. Factors that affect how big these changes can be.
2. Explain how carbon dioxide can cause raised global temperatures in terms of IR radiation.
3. Explain how IR spectroscopy can be used to detect functional groups in an organic molecule. Use the three spectra below to help you.
 - a. Ethanol

infra-red spectrum of ethanol, $\text{CH}_3\text{CH}_2\text{OH}$

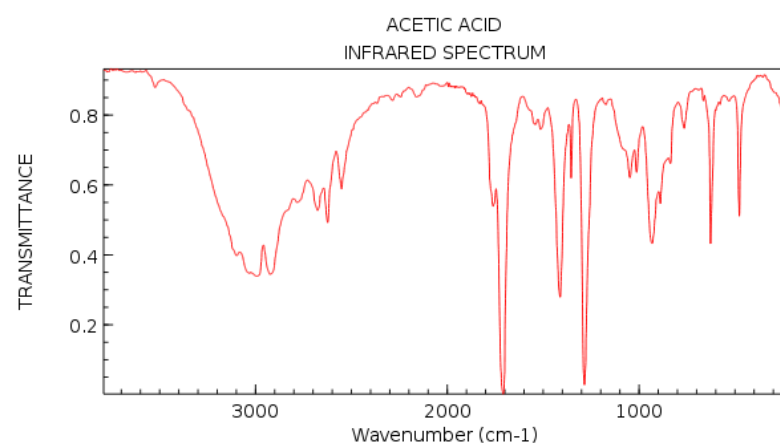


- b. Ethanal



NIST Chemistry WebBook (<http://webbook.nist.gov/chemistry>)

- c. Ethanoic acid



NIST Chemistry WebBook (<http://webbook.nist.gov/chemistry>)