

CHAPTER OVERVIEW

12: STRUCTURE DETERMINATION - MASS SPECTROMETRY AND INFRARED SPECTROSCOPY

LEARNING OBJECTIVES

After you have completed Chapter 12, you should be able to

1. fulfill all of the detailed objectives listed under each individual section.
2. solve road-map problems that include mass spectral data, infrared data, or both.
3. define, and use in context, the key terms introduced.

The processes of identifying and characterizing organic compounds are of great importance to the working organic chemist. With the use of modern instrumental techniques, these tasks can now be accomplished much more readily than in the past. In this chapter, you will learn about two spectroscopic techniques (mass spectroscopy and infrared spectroscopy) that are used to identify organic compounds.

[12.0: Introduction](#)

[12.1: Mass Spectrometry of Small Molecules - Magnetic-Sector Instruments](#)

[12.2: Interpreting Mass Spectra](#)

[12.3: Mass Spectrometry of Some Common Functional Groups](#)

[12.4: Mass Spectrometry in Biological - Time-of-flight \(TOF\) Instruments](#)

[12.5: Spectroscopy and the Electromagnetic Spectrum](#)

[12.6: Infrared Spectroscopy](#)

[12.7: Interpreting Infrared Spectra](#)

[12.8: Infrared Spectra of Some Common Functional Groups](#)

[12.S: Structure Determination - Mass Spectrometry and Infrared Spectroscopy \(Summary\)](#)

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