

CHAPTER OVERVIEW

4: Infrared Spectroscopy

Learning Objectives

After completing this unit the student will be able to:

- Describe the selection rule for infrared-active transitions.
- Determine the vibrations for a triatomic molecule and identify whether they are infrared-active.
- Draw the design of a non-dispersive infrared spectrophotometer and describe how it functions.
- Describe the difference between time and frequency domain spectra.
- Explain how a Michelson Interferometer can be used to obtain a time domain spectrum.
- Explain the advantages of Fourier Transform infrared spectroscopy over conventional infrared spectroscopy.

[4.1: Introduction to Infrared Spectroscopy](#)

[4.2: Specialized Infrared Methods](#)

[4.3: Fourier-Transform Infrared Spectroscopy \(FT-IR\)](#)

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