

## CHAPTER OVERVIEW

### 4: Q-NMR Experiment

#### Laboratory Experiment: Determination of Malic Acid Content in Apple Juice by NMR

This laboratory experiment contains 4 sections, a set of *prelab* exercises, introductory material to provide *background* in addition to the basic theory, practical aspects and virtual laboratory sections of this module, a *dry lab* that allows students to download and process Q-NMR data and a *wet lab* experiment in which students make their own measurements to quantify the malic acid content of apple juice. Additional background information about malic acid's role in fermentation and wine production, and its measurement by Q-NMR can be found in the Q-NMR Applications section of this module.

#### Topic hierarchy

[4.1: Prelab Exercises](#)

[4.2: Background](#)

[4.3: Dry Lab](#)

[4.4: Wet Lab](#)

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