

# **Advanced Interpretation of Mass Spectra**

Agilent Chemical Analysis Training Courses

## H4065A

Three Days Lecture Only

### **Description**

Extends the interpretive skills developed in Interpretation of Mass Spectra (H4063A). The focus includes bond cleavages common to specific functional groups and intramolecular rearrangements. Problem sessions are included throughout the course.

### 2.4 CEUs

# **Course Outline**

### Day One

- Performance Verification
- QA and QC Measurements
- Mass Resolution
- Tuning
- Review of Fundamental Principles
- Element Composition
- The Molecular Ion
- Basic Mechanisms of Fragmentation
- Ion Stability and Abundance
- Branching Versus Stability

## Day Two

- Basic Mechanisms of Fragmentation
- Electronegativity
- Specific Bond Cleavages
- Alpha Cleavage
- Inductive Cleavage

Day Three

- Specific Bond Cleavages
- Rearrangements
- Postulation of Molecular Structure
- Spectrum Appearance
- Ion Series

# **Prerequisites**

Interpretation of Mass Spectra (H4063A) and six months of experience in interpreting mass spectra or graduate training in organic chemistry and at least one year of GC-MS experience.

Students should bring a calculator.

## **Student Profile**

An advanced GC-MS chemist with primary responsibility for identifying unknown samples from mass spectra.

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