



## GC Technical Training

**Module Name:** GC Method Development

**Time Allocated:** 1.5 - 2 hours

**Intended Audience:** This talk assumes the attendee has at least the knowledge obtained from attending the GC Beginner Course

### Content Covers:

- Development of a GC method to achieve good separation of a complex mix using both polar and non-polar columns
- The difference between a FID and a MS as the detection mode in the method development
- Review of parameters affecting resolution
- Understanding basic parameters of the compounds to be separated e.g., polarity, boiling point, thermal lability
- Choosing the right liner for the separation
- Choosing the right column for the separation
- Setting starting conditions e.g., inlet temperature, start temperature program, detector conditions
- Analyzing the chromatogram and changing conditions to affect better resolution and shorten run times

### At the completion of this seminar, attendees should be able to:

- Take a complex mixture and develop GC conditions for separation
- Develop a GC method using a non-polar 100% methyl column
- Develop a GC method using a polar WAX column
- Understand the affect that changing oven temperature ramp rates can have retention characteristics on both polar and non-polar columns
- Deal with unknown peaks and how to trace possible identification – even without a mass spec
- Report final conditions
- Train a technician to analyze subsequent samples