

# Essentials and Fundamentals of HPLC



## Course Description

### Course Objective:

Chromatography is a major analytical separation technique used in many laboratories. Understanding the theory behind the assay, equipment and testing strategies leads to earlier and faster problem solving and fewer laboratory investigations.

Optional practical exercises and competency assessment at the end of each module enhance skills used in the workplace.

Modules in the course do not cover manufacturer specific instrument topics, however these can be provided as part of a customised training program.

This course is designed to deliver a thorough understanding of the theory and practice of Separation Science.

### Course Outline:

#### The course covers:

- » Introduction to HPLC
- » HPLC Theory
- » HPLC Pumps
- » HPLC Detectors
- » HPLC Injectors & Fittings
- » HPLC Column Selection
- » HPLC Separation Modes
- » Method Optimisation
- » Chromatographic Calculations
- » HPLC & Column Maintenance
- » HPLC Troubleshooting
- » Practical Exercises (*Optional*)

### Course Leader:

Greg Jordan has over 30 years experience in HPLC, GC, Mass Spectrometry, Environmental and Pharmaceutical Analysis (QC, Stability and R&D). He has delivered courses in universities and companies in Australia and Asia.

### Bookings or Further Information:

Further information email or phone ICS Analytics at [info@icsanalytics.com.au](mailto:info@icsanalytics.com.au) or +61(0)408 487 671  
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### Outcomes:

On completion of each module, the candidate will be able to:

- » Describe the theory of Chromatography,
- » Describe the major components of HPLC,
- » Apply this knowledge in a practical situation, and
- » Use the skills to solve “real” laboratory problems.

### Who's it for:

- » The course is designed for those currently employed in laboratories:
  - » Who use or are about to use chromatographic instruments, or
  - » Who require a better understanding of the equipment they currently use.

### Course Format:

- » A combination of lecture style presentations and problem solving.
- » Course notes that include the slides, explanatory information and references are provided to each participant.
- » The practical/assessment component covers approximately 25% of the course time.

### Certificate of Participation:

Certificates of Participation will be awarded to participants who have achieved 75% attendance for the course