
Practical HPLC Troubleshooting Course - 2 days

DAY 1

0900-1100

Overview of HPLC Equipment

HPLC tubing and fittings

Preparing a HPLC for use

Conditions required for dynamic equilibrium

Routine maintenance guide for:

- Pumps- Pump heads, pistons, seals, check valves and flow rate control and accuracy.
- Detectors- Flow cell and lamps
- Injection system- Rotor seals, Rheodyne valves and Autosamplers

1115-1300

Column Protection and Regeneration

Column frit and void problems

Basic Precautions and Safety

1400-1700

HPLC Fault diagnosis I

Key indicators

- Baseline- drifting, noisy, spiky, cycling etc
- Chromatogram Reproducibility and Sensitivity
- Ghost peaks

Identifying problems using the indicators

DAY 2

0900-1100

HPLC Fault diagnosis II

Key indicators

- Peak Shape
- Back Pressure
- Solvent Delivery

Identifying problems using the indicators

1115-1300

Troubleshooting-Problem Causes and Remedy I

- Pump and Abnormal pressure
- Chromatogram problems
- Injector Problems

1400-1500

Troubleshooting-Problem Causes and Remedy II

- Sample and Eluent
- Column and Temperature Control
- Detector

1500-1700

Problem Scenarios

Assessment and Discussion