

Masterclass 6: HPLC Instrumentation- 1 day

0900-1100

Introduction to HPLC Equipment

Pumps

- Isocratic
- Gradient - Low Pressure Mixing
- Gradient - High Pressure Mixing
- Syringe pumps
- Flow rate range
- Scaling up for prep HPLC
- Scaling down for microbore
- Basic maintenance -pistons, piston seals, check valves
- Flow and pressure calibration

Detectors

- UV
- Diode Array
- Refractive Index
- Fluorescence
- Conductivity
- Evaporative Light Scattering
- Mass Spec
- Detection limits
- Basic maintenance - lamp and cell

1115-1300

Manual Valves

Autosamplers

- Fixed Volume
- Variable volume

Data Systems

- Digital
- Analogue
- System control

Fluid Connections

Electrical Connections

1400-1700

Column Heater- Column Oven and Block Heater

Degasser

- Helium
- Vacuum Membrane Degasser

Solvent Recycler

Back Pressure Regulator

Pulse Dampener

Dynamic and Static Mixer

Fraction Collector

Column switching

Questions and Discussion