Stuart Jones HPLC Academy

Introduction to Practical HPLC Course- 2 days

DAY 1

0900-1100

History of HPLC
Basic theory of HPLC
HPLC Equipment Overview
Introduction to manual injection valves, isocratic pumps and UV detection

1115-1300

Sample preparation
HPLC solvent selection
Making up an accurate mobile phase and degassing
Preparing a HPLC system for use
Making a model injection
HPLC Columns
Column efficiency and capacity
Use of UV and RI Detectors

1400-1700

Laboratory Session I
We take an analytical method for the analysis of five sample components and set up an external standard calibration method from scratch. We weigh out standards and make up dilutions for a five point calibration, and run the standards in duplicate to calibrate the method. Working out the peak identification, the retention times and appropriate time windows for each peak. We decide on integration parameters and create a Peak Table. Once we have checked the calibration we set the most appropriate calibration curve and decide whether to include the origin.

DAY 2

0900-1100

Effects of changing eluent composition, flow rate, column and detector
Normal phase versus reversed phase analysis
Introduction to HPLC fittings and tubing
Making flow path connections
Introduction to chromatographic integration
Quantitative analysis

1115-1300

Introduction to Autosamplers
Basic precautions to avoid problems
Safety: Working with small particle size materials, high pressures, UV radiation and electronic safety

1400-1600

Laboratory Session II
Analysis of unknown samples using the external standard calibration method created on Day 1 created.
Working with samples that fall outside of the calibration range

1600-1700

Assessment and Discussion