

2. How to Develop HPLC Methods

Summary

Learn how to select appropriate method conditions and perform suitable investigative experiments to obtain a set of method parameters which enables the desired separation for mixtures of analytes.

This course is ideal for those who have experience of running HPLC methods and now want to learn how to develop new methods.

Course Outline

- **Developing an HPLC method using a 5-step strategy:**
 - Step 1:** Setting suitable objectives for method development
 - Step 2:** Assessing all available information
 - Step 3:** Selecting suitable samples
 - Step 4:** Performing scouting experiments to select suitable initial conditions
 - Step 5:** Optimising the method to define method parameters which achieve the desired separation

This course focuses on reversed phase mode separations.

Practical Skills Acquired

This course will enable you to take a strategic approach to developing HPLC methods with an understanding of the factors which can be adjusted to manipulate the retention time of analytes. In addition you will be able to:

1. Define the objectives for the development of a HPLC analytical method.
2. Effectively assess all the available relevant information relating to the desired method, e.g. pKa of the analyte.
3. Select and prepare a suitable sample or samples to be used for the method development.
4. Select suitable scouting conditions to find a suitable column and mobile phase system.
5. Optimise the chromatographic conditions to result in the best possible separation.