

Recent Developments in Separation Sciences for Pharmaceutical Analysis

This course will explore the recent innovations in fluid-based separation techniques to extend efficiency, resolution, peak capacity and speed for pharmaceutical analysis. Tools such as kinetic plots will be used to describe how this theoretical platform can be exploited to tune methods for speed and separation efficiency through appropriate choice of pressure and temperature. Innovative trends in selectivity tuning, multidimensional and comprehensive analyses for the future pharmaceutical analysis laboratory will be presented. The features of detection technologies e.g. CAD, ELSD, MS, ICPMS will also be examined. Finally, in the framework of the acetonitrile shortage, green alternatives will be presented e.g. supercritical fluid chromatography, aqueous normal phase LC, thermoresponsive LC, etc. This course is suitable for both beginners and experienced level separation scientists.

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