
NEW DEVELOPMENTS IN SAMPLE PREPARATION TECHNIQUES FOR ENVIRONMENTAL ANALYSIS

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In this tutorial an overview is given of new sample preparation techniques for environmental analysis. The keywords in the development of innovative sample preparation techniques are solvent reduction, miniaturization, automation and hyphenation. In the past years several methods are developed that meet these criteria. An overview will be given of techniques that can be used for air monitoring, water analysis and analysis of solid (soil and sediment) samples. These techniques will be illustrated by practical examples. Special attention will be paid to active and passive air sampling using sorbent techniques, extraction of persistent organic pollutants (POPs), including endocrine disrupting chemicals (EDCs) using solvent-free techniques such as solid phase micro-extraction (SPME) and stir bar sorptive extraction (SBSE) and on-line coupling of solid phase extraction (SPE) to GC and HPLC.