



Innovations in Solvent Extraction: Evolution you can see

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Accelerated solvent extraction (ASE) is an innovative approach to liquid-solid extraction. ASE was developed in the earlier 1990's and introduced by Dionex at Pittcon in 1995. Since that introduction, thousands of systems have been sold worldwide for solvent extraction in the environmental, bio/pharmaceutical, chemical/petrochemical and food and beverage industry.

Traditional methods such as Soxhlet or shakers have been used to extract solid samples. These methods require long periods of time (16 hours) and large volumes of solvent (300 mL) and large amounts of manual sample handling and manipulation in preparation for analysis. ASE can perform these extractions in short periods of time and with small amounts of solvent. This technique uses elevated temperature and pressures to achieve analyte extractions from solid or semi-solid matrices in about 15 minutes and with small volumes of solvents.

ASE is accepted under Method 3545A for the extraction of conventional environmental toxins such as PCBs and chlorinated pesticides.

ASE technology has proven to be an effective technique for solvent extraction. It has been 13 years since the initial product and technology introduction of ASE. Now the analytical chemistry markets and specifically the sample preparation markets require additional innovations, features and capabilities for automated solvent extractions systems. Market research indicates that customers desire systems that provide reliable automation, flexibility in sample size and operation and extended capabilities to accommodate new and different applications.

This presentation will describe the innovations, features and benefits included in new product that addresses the markets desire for reliable automation, improved system flexibility increased throughput and extended capabilities. Data and proof statements will be presented that validate the effectiveness of this new product for new and different applications.