

Welch Solid Phase Extraction (SPE)



Sample preparation is one of the most important key steps for the entire analysis process, as over 60% of the entire analysis process time and over 30% of the analysis errors are from the sample preparation. Over the last twenty years, SPE has become the most powerful technique prior to analytical chromatography for the cleanup, purification, and concentration of samples from various matrices, including urine, blood, water, beverages, soil, and animal tissue.

Benefits of SPE:

- ◆ Switch sample matrices to forms **which are** more compatible with chromatographic analysis
- ◆ Concentrate analytes for increased sensitivity
- ◆ Remove interferences to simplify chromatography and improve quantitation
- ◆ Protect the analytical column from contaminants

Common SPE Applications:

- ◆ Pharmaceutical compounds and metabolites in biological fluids
- ◆ Drugs of abuse in biological fluids
- ◆ Environmental pollutants in drinking and wastewater
- ◆ Pesticides and antibiotics in food/agricultural matrices
- ◆ Desalting of proteins and peptides
- ◆ Fractionation of lipids
- ◆ Water and fat soluble vitamins



SPE Products

Polymeric SPE: PS/DVB, BRP, P-SCX, P-SAX, P-WCX, P-WAX

Silica based SPE: C18E, C18, C8, Phenyl, CN, NH₂, PSA, SCX, SAX, WAX, PRS, Silica, Diol

Inorganic SPE: Florisil PR, GraphiCarb, Alumina-A/N/B, Celite

Mixed Mode: GraphiCarb/NH₂, C8/SCX, GraphiCarb/PSA, GraphiCarb/SAX, SAX/PSA

Special SPE: Bap, Sudan Red, Plasticizer, Tea leaf, AZO Dyes, Chinese Herbal

Immunoaffinity column: Aflatoxin, Ochratoxin, T2, Zearalenone, Vomitoxin, Fumonisin

IC Pretreatment column: IC-H, IC-Ag, IC-Ag/H, IC-Ba, IC-Na, IC-RP



Vacuum Pump



Solid phase Extraction Manifold