

Emerging Environmental Contaminants and Solid Phase Microextraction Janusz Pawliszyn's Legacy in the Environmental Arena

Susan D. Richardson, U.S. Environmental Protection Agency, National Exposure Research Laboratory, Athens, GA 30605

Solid phase microextraction (SPME) has revolutionized the way samples are extracted, enabling rapid, automated, and solventless extraction of many different sample types, including air, water, soil, and biological samples. As such, SPME is widely used for environmental, food, forensic, clinical, and pharmaceutical applications and has become commonplace in many laboratories worldwide. In the environmental arena, SPME is being used to extract and concentrate many new emerging contaminants, including pharmaceuticals, endocrine disrupting compounds, disinfection by-products, brominated flame retardants, dioxane, chiral contaminants, musks, algal toxins, new pesticides, and pesticide transformation products. An overview of these emerging contaminants will be presented, along with advantages that SPME has offered in enabling their measurement in the environment.