

# Solid Phase Microextraction (SPME) for PAHs in Pore Water

2023

Assessing risks to invertebrate receptors resulting from exposure to PAHs in contaminated sediments is a challenging but important component of sediment management.

## **Recently the U.S. EPA stated:**

"At sites where the assumptions of equilibrium partitioning (EqP) are violated because of site-specific conditions, approaches like solid phase microextraction (SPME) may be necessary to attain accurate measures of PAH exposure concentrations." (EPA/600/R-06/162)  
The determination of chemical bioavailability at sites contaminated with crude oil, coal tar, and related substances is more accurate using the SPME technique.

In a round robin study of EPA Method 8272 and ASTM D 7363, META's lab was the only lab to pass all compounds in all samples. We are now working with ESS Laboratory to provide our clients with low level PAH and alkylated PAH determination in pore water samples by ASTM D 7376-13.

Working with ESS, META also offers analysis of whole sediment, water, and tissue samples for:

- low level PAHs and alkylated PAHs in petroleum or coal tar impacted samples
  - EPA 34 compounds
  - NOAA list
  - custom compound lists
- TPH, saturated hydrocarbons, petroleum biomarker compounds

## **Sediment Services**

Obtaining accurate and reliable analytical data is often the critical first step in defining any environmental problem and a crucial component in every phase of its solution. META recognizes this responsibility and is committed



**Shipyard and sediment investigations**

to providing high quality, reliable laboratory data and interpretation to all of our clients.

- Sampling designs,
- Specialty & customized sampling methods,
- Routing and special testing services
- Critical data review services
- Statistical data interpretation and modeling
- PCA, PVA, and receptor modeling
- Background assessment
- GIS mapping and presentation services
- Cost allocation
- Expert witness

(ASTM D7363-13)