

Title: Screening PFAS in Fish and Shellfish Species of the Narragansett Bay

The fact that Per- and Polyfluoroalkyl Substances (PFAS) are highly stable and ubiquitously distributed in the environment; the constant human exposure to short chain and long chain PFAS and bioaccumulation of long chain PFAS in both wildlife and humans globally, drives the need for reliable detection and bioaccumulation patterns of PFAS compounds. PFAS are commonly found in groundwater, surface water, and drinking water near contamination sites, and can also bioaccumulate in food webs, resulting in contaminated fish, shellfish, and other food sources. Consumption of fish and shellfish was associated with PFAS levels in blood in a representative sampling of Americans. As such, due to bioaccumulation and biomagnification, the consumption of fish and shellfish is of particular concern for human uptake of PFAS.

Considering the relevance of the fisheries industry in RI and the higher consumption of shell fish species in the community; it is imperative to screen the PFAS levels in the ecosystem and shell fish species of concern for RI community. This will be instrumental in the coming years as the RI legislation is working towards developing PFAS advisory and regulation mechanisms.

- Related Tasks:

- **Sampling:** Fish and Shell fish species either will be collected from shell fishing grounds around the coastal waters of RI. Or purchased from local fish markets providing locally caught species.
- **Lab work:** Extraction of fish and Shell fish species following an SOP provided with some probable method modification work.
- **Training:** field sampling and sample handling, sample preparation and extraction techniques, instrumental analysis technique, data analysis and presentation, report writing
 - Requirement: interest in field sampling, chemistry, biology, and full commitment
 - Professor Rainer Lohmann
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