



Black River

Passive In Situ Concentration Extraction Sampler (PISCES)—PCBs

Summary

Media:	Surface water
Study Type:	Example
Technology:	Equilibration
Peer Reviewed:	Yes
Publication Date:	1993

Site Description

- PISCES samplers were deployed along the Black River in New York to investigate sources of PCBs to the water body. This could not have been effectively accomplished using conventional methods.
- Samplers were deployed on three occasions at six stations (including one control) in duplicate based on the results of previous studies to investigate PCB concentrations from a method intended to mimic direct uptake of chemicals from water by fish.
- Initial results led to further investigation to better resolve the source of PCBs to the river, which was achieved through follow-up sampling.
- Reproducibility between duplicates was considered very good, with variations attributable to damage to the membranes in isolated instances.

Remedial Phase

PISCES samplers were used as the primary method of data collection during investigation activities.

Outcome

Evidence collected using the passive samplers located a PCB source area along the river that may not have been identified using conventional methods. The study authors noted that the samplers are field-capable, cost-effective, and able to deliver temporally integrated samples to economically investigate heterogeneous environments.

Case Study Reference

Litten, S.; B. Mead; and J. Hassett. 1993. Application of Passive Samplers (PISCES) to Locating the Source of PCBs on the Black River, New York. *Environmental Toxicology and Chemistry*, 12: 639-647.