Highlight on Fluorometric Tissue-Based Biosensors for Water Quality Monitoring

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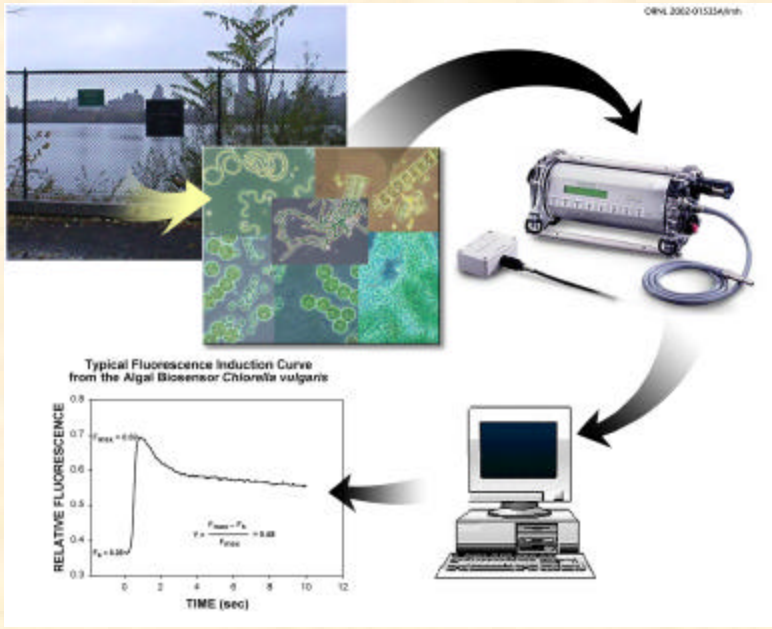
- Primary-source freshwater drinking samples from the Clinch and Tennessee Rivers.
- Tissue-based biosensor detection system that uses naturally occurring aquatic photosynthetic tissue as the sensing material for detection of chemical antagonists in the water.
- Successfully detected algae in every sample that we examined and readily monitored changes in the characteristic fluorescence induction curves.
- Samples exposed to potassium cyanide (KCN), methyl parathion (MPt), N'(3,4-dichlorophenyl)-N,N-dimethylurea (DCMU), and paraquat.
- Sensor material is external to the detecting instrument and is continuously refreshed.
- Biosensors may be used as continuous rapid-warning sentinels for detection of chemical warfare agents in sunlight-exposed drinking water supplies.



Successive stages of data acquisition and analysis for fluorescence induction curves of naturally-occurring algae in primary source drinking water.

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