OIL SENSOR BOX

BIOSENSE

BIOSENSE brings to the market a portable device for in-situ identification of toxic hydrocarbons from crude oil and its derivatives in fresh and salt water.

As maritime transport and related industrial activities increase, the contamination of waters with crude oil and its derivatives remains a recognised European problem. Oil industry as well as regional environmental and governmental organisations rely on state-of-the-art techniques such as fluorescence spectroscopy. However, these technologies are slow, lab-based and costly.

The robust portable solution provided by BIOSENSE (based on membrane inlet mass spectrometry) offers high resolution for the target compounds and sensitivity (to low ppb) in water, ensuring reliable detection of up to 64 elements simultaneously. The device is designed to be three times cheaper when compared to the well-known portable GC/MS systems. Not forgetting that the timely detection of oil leaks may save millions of euros on environmental fines & cleaning.

Figure 1: Analysis in the Larnaca marina

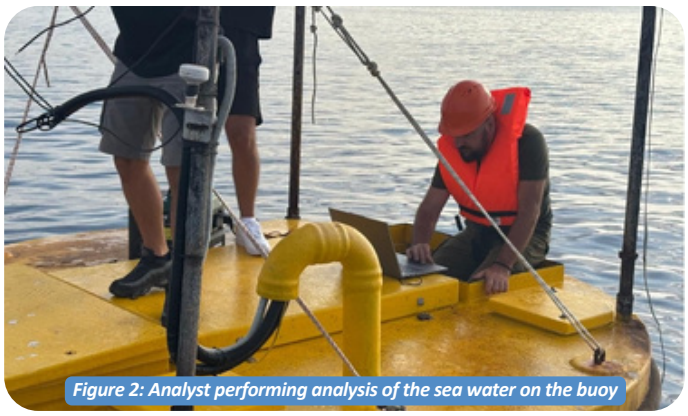

Figure 2: Analyst performing analysis of the sea water on the buoy

The sensor has been successfully deployed at several locations in Cyprus, including St. Raphael Marina near Limassol, a buoy located 2 km offshore from Limassol, and Larnaca Marina. These test deployments demonstrate that oil sensors are a viable option for effective pollution monitoring.

The next steps include finalizing the product and completing the data-processing software to make the instrument as user-friendly as possible. The goal is to develop a commercially available real-time VOC's monitoring system that can be deployed across various types of surface waters, fully compliant with EU regulations.

Key Benefits

- High stability allowing for continuous monitoring and trend detection
- Cheaper than lab
- Detection of concentration of individual oil compounds
- Real-time monitoring, no sample preparation

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