

Configurations

The OIL-Station and OIL-Station Pro have been designed for outdoor operation, where the UviLux fluorometers can be deployed within a water trough or mounted in flow-through manifolds for in-line operation. A single cable connects the UviLux fluorometers to the Watchkeeper display and logger unit, which is powered from a 24 Vdc supply. Signal inputs are presented on the screen and up to three 4 – 20 mA signals can be accessed for data system networking. Audible alarms or control valves can be fitted and programmed to alert or activate when signals exceed user-set thresholds.

Data is recorded onto a 2 Gbyte memory card. Data can be downloaded via a USB cable, or by removal of the memory card.

Specification

UviLux Fluorometer

Size	Ø70 x 150 mm	
Weight	800 g	
Pressure rating	60 bar	

UviLux Performance

	PAH fuel	CDOM (crude)
Sensitivity (QSU)	0.06	0.03
Calibrated range (QSU)	600	600
Example compound: sensitivity - range (ppb)	BTEX*: 3.0 - 50,000	Perylene: 0.003 - 50

*BTEX is Benzene, Toluene, Ethylbenzene, p-Xylene, m-Xylene, o-Xylene at equal ppb concentrations

OIL-Station, single UviLux fluorometer with Flow Manifold

Size	Ø130 x 200 mm	
Weight	2.5 kg	
Fluid connections	Union, 20mm, PN16	
Pressure rating	4 bar	
Max operating temp.	55 °C	

OIL-Station Pro, two UviLux fluorometers with Flow Manifolds

Size	265 x 200 x 200 mm	
Weight	5 kg	
Fluid connections	Union, 20mm, PN16	
Pressure rating	4 bar	
Max operating temp.	55 °C	

Watchkeeper display and logger

Display	320 x 240 pixel qVGA backlit LCD	
Display size	70 x 50 mm	
Size	200 x 110 x 60 mm	
Weight	900 g	
Memory capacity	2 Gbyte	
IP rating	IP67	
Voltage input	24 Vdc	
Power	2.8 W @ 24 Vdc 4.6 W @ 24 Vdc (Pro)	
Temperature range	-20 °C to 55 °C	

Contact us today to see how we can help you

OIL-Station and OIL-Station Pro



www.chelsea.co.uk

OIL-Station provides real-time, highly sensitive monitoring of dissolved aromatic hydrocarbons in laboratory or process control environments.



Applications

- Abstraction point monitoring
- Hydrocarbon detection in stored waters
- Hydrocarbon monitoring within ports and coastal areas
- Pollution tracking in streams and estuaries
- Road and airport run-off pollution monitoring



Clarity in Water

In view of our continual improvement, the designs and specifications of our products may vary from those described.

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What can the OIL-Station do for you?



How does it work?

★ Features

- Real-time display of dissolved aromatic hydrocarbon levels (in µg/l)
- Automated data logging (2Gbyte storage capacity)
- 4 – 20mA output for data export in real-time
- Relay for audible alarm
- In-line flow-through operation with standard pipefittings
- High sensitivity

Introduction

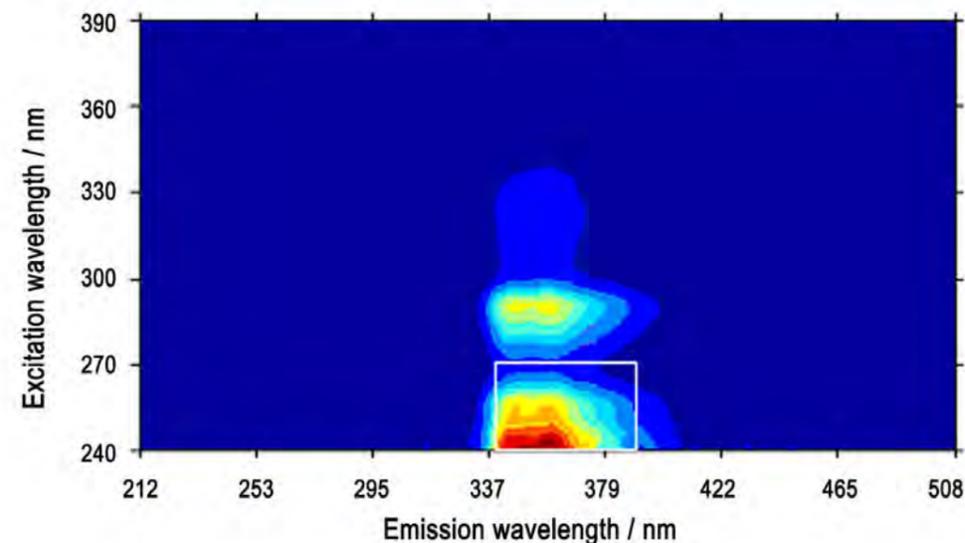
CTG's **OIL-Station** and **OIL-Station Pro** systems provide process engineers and site managers with real-time measurements of dissolved Polycyclic Aromatic Hydrocarbon (PAH).

The **OIL-Station** comprises a CTG UviLux fluorometer and a Watchkeeper wall mounted data display and logger. CTG's UviLux fluorometers detect UV fluorescence with **industry-leading sensitivity and selectivity** and have been optimised for minimal interference from water turbidity.

Data is displayed on the Watchkeeper's **colour touchscreen** and is logged internally. Up to three 4 - 20mA outputs are provided for data transmission.

Examples of detectable compounds include:

- Carbazole
- Phenanthrene
- Naphthalene (NDSA)
- BTEX
- Perylene
- Pyrene (PTSA)
- Benzo[a]pyrene



Carbazole fluorescence map indicating UviLux (refined) measurement window

CTG's **OIL-Station** and **Oil-Station Pro** detect PAH fluorescence. When dissolved PAH compounds absorb UV light they re-emit a fraction of this energy as fluorescence at longer wavelengths. Fluorescence intensity is directly proportional to PAH concentration. The technique is widely recognised as one of the **most sensitive detection methods available**.

CTG's UviLux sensors use a stabilised UV LED light source and a photomultiplier detector to provide exceptional measurement sensitivities. By exciting fluorescence at deep UV wavelengths the UviLux fluorometers can detect smaller PAH compounds typically associated with weathered oils.

i OIL-Station and Oil-Station Pro

The **OIL-Station** comprises a single CTG UviLux fluorometer and a Watchkeeper wall mounted data display and logger. The UviLux fluorometer is factory-configured for refined PAH detection. The **OIL-Station Pro** includes an additional UviLux sensor for either refined and crude PAH determination, or for discriminating PAH from a high background of Coloured Dissolved Organic Matter (CDOM).

The second sensor in the **OIL-Station Pro** provides inherent robustness to varying CDOM background, for example when correlating PAH levels across a wide range of locations.



CTG Hydrocarbon fluorometers have provided both scientists and regulators with a dependable sensor which has been used extensively during the post-Macondo spill in the Gulf of Mexico, as well as monitoring the impacts of the sinking of the Prestige and Costa Concordia vessels



Touch screen display



Audible alarms when exceeding thresholds



2gb storage capacity