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STS Instruments have produced the fully portable SMF4 Fluorimeter which allows instant on site quantification of Tryptophan in water samples (an ideal indicator of BOD). Immediate decisions can therefore be taken regarding water quality and control actions.

This technique simplifies and quantifies investigations into cross connected sewers, illegal discharges to surface waters and monitoring consent agreements. Operation and control of the instrument has been streamlined so that it can be used by non scientific staff.

- Portable instrument for the measurement of organic pollutants in water (BOD equivalent)
- Instant reading on site without laboratory analysis costs and timescale
- Tracing pollutant sources back to origin
- Data logging & remote monitoring capabilities
- Can be used by unskilled operators for routine monitoring
- Laboratory application for pre screening BOD samples to eliminate numerous dilutions

The design of the SMF4 draws on the research carried out by Prof Andy Baker at Birmingham University (UK), who showed that tryptophan is an excellent indicator of anthropomorphic pollution and that it may be measured by fluorescence. Further research allowed strong correlations to be made between tryptophan and the standard Biological Oxygen Demand test (BOD), but with an instant result rather than a 5 day delay.

The instrument can be used on site for instant sampling and also in data logging mode (utilising flow cell technology) to capture a set of user defined readings over a desired timescale. The instrument's internal memory is capable of holding up to

2000 sample records before requiring download. Data can be downloaded through the RS232 port for further analysis.

Adjustable sensitivity settings mean that the instrument may be used for a range of different pollutant levels without the need for time consuming and costly dilutions.

Applications for the instrument include Water Companies use in monitoring organic pollution in storm water sewers, assessment of BOD values through the waste water treatment process and monitoring company liable discharges to watercourses. Regulators applications include monitoring of known problematic discharges, rapid response to reported incidents, monitoring of water quality flowing onto beaches and tracing of pollution events upstream.

For more information please click:

[SMF4 Portable Fluorimeter - Safe Training Systems Ltd](#)

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