ON-LINE Screening of Water Quality by FLUO-IMAGER Monitor

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Abstract

Demands from industry for quick and appropriate analyses are becoming more and more apparent both for process control and for environmental protection. As a result of this many direct measurement techniques are currently under investigation, with fluorescence as one of them. The feasibility of performing measurements without time consuming sample pre-treatment lends to the construction of on-line diagnostic systems for the rapid monitoring of water matrixes.

The FLUO-IMAGER monitor is intended for the analysis of organic compounds in natural, domestic and technological waters in an On-line mode. The analytical concept uses the technique of Spectral Fluorescent Signatures (SFS). The measurement technology serves for simultaneous detection, identification and quantification of different types of crude oil and fuel oil, technical lubricants, polyaromatic hydrocarbons, phenols and their derivatives in waters down to sub-ppm levels. Values for DOC, COD, turbidity and suspended matter are also derived using absorption, scattering and fluorescent data delivered by the hardware and the software of the instrument.

Used in fast screening mode, the FLUO-IMAGER provides a powerful identification and quantification technique in the monitoring and control of water quality in a variety of application fields. On-line screening for organic pollutants in industrial waste water effluents, cooling water of power plants, process waters, and natural water basins are good examples of the versatility of the technique.