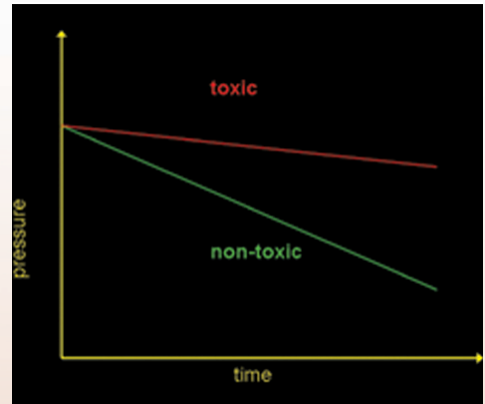


BAROXYMETER

Rapid Toxicity Detection of Waste Water

Toxicants in Waste Water Treatment Plant (WWTP) influent may inhibit the biological activity of the activated sludge and upset the plant process. This can be avoided if influent wastewater is monitored for toxicity and protective action is taken when toxicity is detected. Early warning systems for toxic incidents or even routine monitoring are fairly limited in Waste Water Treatment Plants. The analytical instruments, which are able to detect and estimate the toxicity of the influents and effluents, are expensive, mainly laboratory-based, and typically require several days to produce a result. Yet effective waste management could only realistically be achieved with a rapid method to detect a toxic effluent *in situ*, if possible.



Toxicity is determined by a change in pressure as metabolising bacteria are inhibited / killed by the addition of a sample.

The BAROXYMETER is a portable respirometer designed for the Direct Toxicity Assessment (DTA) of Waste Water. DTA takes a risk-based approach to water quality analysis, using effects in biological systems as a basis for assessing likely harm to an ecosystem in water receiving effluent discharges. With DTA an integrated assessment can be made of the impact of complex mixtures of pollutants, which can usually only be partially characterized by chemical analysis.

The BAROXYMETER is aimed at the busy operator in need of an early rapid toxicity warning system that can be used directly with the sample of interest. The instrument monitors the respiration rate of bacteria in contact with a minimal volume of an "unknown" sample and reports back to the operator in terms of % respiration inhibition. The BAROXYMETER is capable of detecting toxicity from highly toxic samples within 10 minutes.

The BAROXYMETER has also been able to detect heavy metals and a variety of other substances ranging from pesticides/insecticides to antibacterial substances. Furthermore field trials with major UK Water Companies as well as with the UK Environmental Agency have proven the versatility and effectiveness of the instrument in detecting toxicity in waste water.

For further information, or to book a demonstration, please contact us on the telephone number below.

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