

New compact TOC Analyser protects pure and ultrapure water quality

Swiss instrument manufacturer, Swan Analytical, has announced the launch of a new compact version of its AMI LineTOC monitor for pure and ultrapure water applications.

"This new instrument is simple to install and run; fully compliant with industry standards, and suitable for the continuous monitoring of medical water for injection and pure water in pharmaceutical and related industries, as well as ultrapure water in the semiconductor industry," explains UK Sales Manager, John Saxton. "The new compact version retains a user-friendly design which allows easy access to system components, in a format that lends itself to installations in common mounting spaces on water purification or distribution skids."

The AMI LineTOC Compact Version provides reagent-free measurement of total organic carbon (TOC) by UV oxidation and differential conductivity detection. With a fast response time of under two minutes, the device offers a wide measurement range from 0 to 1000 ppb with a resolution of 0.01 ppb in its lowest range.

Organic contaminants in pure and ultrapure water represent a significant threat to product quality and process efficiency in a wide variety of industries. If undetected, organic contaminants can also encourage the growth of microorganisms. In the semiconductor industry, organic contamination causes defects in sensitive photo-lithographic processes which damage wafers and reduce yield. In the pharmaceutical industry, the effects of organic contamination can range from troublesome to potentially lethal defects.

TOC derived from organics is frequently the largest source of contamination in UPW systems. Contamination may result from sources present in the supply water and not removed by the purification process. However, contamination may also arise from within the high purity water system itself. Sources include piping, filters, adhesives, process gases, ion-exchange resins and thermoplastic breakdown products created during



AMI LineTOC Compact

sterilization procedures. Continuous monitoring and a fast response time are therefore essential – to monitor trends and raise alarms.

Compliance is assured by the AMI LineTOC Compact with a fully integrated and automatic system suitability test (SST) according to USP <643> and Ph. Eur 2.2.44. An optional validation package is also available for hassle-free instrument qualification during commissioning. In addition, the instrument's firmware provides access protection and an audit trail with event logging.

Summarizing John says: "Working closely with customers, we developed the AMI LineTOC Compact Version to meet their specific needs. For example, an on-board pump stabilizes flow and minimizes the potential for sample contamination, so that the instrument is not reliant on sample flow rate. In addition, with a built-in cooler, hot samples can be handled with ease.

"Other small but important features include simple access to grab samples, and an optional removeable stainless-steel cover. However, the most important deliverables from the AMI LineTOC Compact Version are reliable regulatory compliance from an instrument that is simple to install, operate, calibrate, and maintain, which means that users can protect water quality and minimise operational costs."

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