

# Press Release

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## **German premiere: TOC-4200 Online-TOC analysis with new communication modes**

### **Environmental awareness expands TOC application areas / New kits expand the scope of applications and reduce operating costs**

Shimadzu, one of the world leaders in analytical instrumentation, has introduced its new TOC-4200 online analyzer. This analyzer represents a new generation of instruments applying new modes of communication such as web-based monitoring or the Modbus protocol for digital two-way communication. The system supports virtually all TOC analytical applications such as the monitoring of surface waters, pure water or purified water, as well as monitoring the contaminant levels and pollutant loads in various waters. The TOC-4200 can be applied in wastewater treatment plants (influent and effluent) or in power plants (cooling water circuits, washing water, recovered water, condensates). In addition, the analyzer offers new functionalities enabling extended application possibilities.

### **New communication technologies**

The digital Modbus function allows two-way communication with multiple instruments via a single integrated signal line, thereby reducing electrical wiring complexity. Modbus enables integration into bi-directional communication networks. The optional web-based monitoring function allows access to measurement data or instrument functions from any network-connected computer worldwide.

**Low maintenance analyzer**

The TOC-4200 operates using the well-known catalytic combustion method with NDIR-detection. The relatively low combustion temperature, platinum catalyst, small injection volume and integrated sample pretreatment system allow a reliable TOC determination with low maintenance requirement.

**New design with simplified operation**

The new design includes spatial separation of electronic components, measuring system and fluids. The instrument is operated via a color touch-screen. The clear menu navigation simplifies the creation of calibration curves and measurement methods. A calendar function helps in planning automated determination of control samples or calibration curves.

**Smooth measuring process**

In order to guarantee a smooth measuring process, the TOC-4200 records the consumption of the reagents required. A warning is given as soon as reagents need to be refilled, thereby preventing unnecessary interruption of measurements.

The instrument allows straightforward TOC analysis of offline samples without the need to interrupt online operation. After determination of the TOC value has been completed, the program returns automatically to the online mode.

**Numerous kits extend the range of applications**

The kit for high-salt samples increases maintenance intervals by a factor of up to 10 for the measurement of seawater, wastewaters or other samples containing high salt loads. The TN measuring module enables the determination of the total nitrogen content (TN) via catalytic combustion and chemiluminescence detection.

An optionally available, high-sensitivity kit enables measurement of samples with TOC concentrations below 1 mg C/L, e.g. groundwater, drinking water or recovered deionized water from semiconductor production.



**Figure 1:** The new TOC-4200 online TOC analyzer.

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