

# Sievers\* M5310 C On-Line Dual Stream TOC Analyzer

designed to help municipalities optimize treatment processes and meet EPA requirements



The Sievers M5310 C On-Line Dual Stream Total Organic Carbon (TOC) Analyzer measures two independent sample sources to help municipalities optimize treatment processes and meet EPA requirements for TOC % removal and regulated disinfection byproducts (DBPs).

## measurement of influent and effluent streams with TOC % removal

There are several ways to realize the utility of dual stream TOC analysis. One application is continuous measurement of influent and effluent streams. In this configuration, the analyzer measures raw TOC and treated TOC and then calculates TOC % removal. The TOC % removal result can be used to help municipalities and utilities comply with EPA DBP Regulations. Influent and effluent streams can be measured without the need for filtration thanks to a Raw Water Sampler designed for online sampling of high particulate waters.

## optimization of treatment processes

Dual stream analysis is also beneficial for process control and resource monitoring during water treatment. Specific steps and applications include:

- Coagulation
- Ion exchange
- Granulated activated carbon (GAC)
- Membranes

By analyzing TOC at both the inlet and outlet streams of ion exchange or GAC systems, municipalities can use TOC removal efficiency as an indicator for resin or GAC regeneration and optimize their use of resources.

Membrane systems can be protected by using dual stream analysis and real-time monitoring of TOC removal efficiency to prevent fouling and increase the lifetime of the membranes.

Whether used for continuous measurement of influent and effluent water streams or for monitoring specific steps in the treatment process, the dual stream capability of the Sievers M5310 C On-Line provides users with real-time data to optimize their resource use, protect their systems, and ensure regulatory compliance (**Table 1**).

**Table 1. Examples of Dual Stream TOC Analysis**

Stream 1	Stream 2	Result
Incoming raw water	Effluent treated water	<b>Overall TOC % removal</b>
Water going to GAC/resin/membrane	Water exiting GAC/resin/membrane	<b>Organic removal efficiency</b>

## other uses for dual stream analysis

- Enhanced coagulation
- Enhanced softening
- Advanced oxidation processes
- Reverse osmosis