

Water Technologies & Solutions

# Sievers\* M5310 C TOC Analyzers



ready for the resource revolution



# Process Optimization and Regulation Compliance with Ease

Sievers\* M5310 C Total Organic Carbon (TOC) Analyzers are designed specifically for the drinking water industry. Monitoring organic matter at drinking water treatment facilities can help plant operators understand changes in water quality and make informed decisions about treatment processes. Designed to minimize operator intervention, the M5310 C Analyzers offer cost-effective, reliable measurements—enabling process optimization and regulation compliance with ease.

## we've got you covered

For both raw and finished water monitoring, the M5310 C promises peace of mind when measuring organics at treatment plants or within distribution systems. M5310 C Analyzers recover difficult-to-oxidize organic compounds, such as humic acid, and detect organics of all molecular weights and chemical structures, including complex aromatics.

The analyzers are compliant with Standard Methods 5310 C and US EPA 415.3 using UV persulfate oxidation with membrane conductivity detection. The innovative Membrane Conductometric Detection technology has proven to be an extremely reliable method for measuring TOC and delivers unmatched stability. Calibration is recommended for M5310 C Analyzers just once per year and can easily be conducted on-site. In addition, utilization of the analyzers supports compliance with Disinfectants and Disinfection Byproducts (DBP) Rules through automatic calculations of TOC % removal for influent and effluent streams or samples. TOC analysis at water treatment facilities is quick and easy with the M5310 C and can help optimize chemical dosing for coagulation, flocculation, and other processes, ultimately leading to cost savings and avoidance of costly repairs.

## quick to set up, easy to use and maintain

- Pre-calibrated for simple installation —no warm up periods or high temperature operation
- No need for special training to set up, operate, or maintain
- Minimal maintenance — typically just a few hours per year
- Modular design for quick consumables replacement
- Online and portable models now with IP-45 and IP-21 enclosure ratings, respectively

- Self-contained with small footprint and internal reagent packs — no external chemicals, catalysts, or gas supplies required
- Easy data communications — export or collect data via USB, 4-20 mA, or Modbus TCP/IP outputs

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**Membrane Conductometric Detection** technology delivers unmatched stability, preventing significant drift over time. The recommended calibration for M5310 C is just once per year and can easily be conducted on-site. In contrast, TOC Analyzers that use non-dispersive infrared (NDIR) detection may require weekly or even daily calibration.

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## optional accessories and configurations

- The Two-Stream Inlet configuration for the M5310 C On-Line Analyzer enables automatic sampling of influent and treated water with adjustable reagent flow rates for each stream. One stream can be dedicated to raw water and another to finished water for DBP Rule monitoring.
- A unique Integrated On-Line Sampling (iOS) system conveniently allows standards or grab samples to be introduced without removing the instrument from the continuous sample source or changing the sample inlet configuration.
- A Raw Water Sampler Kit is available in place of the iOS system to provide online handling of complex water matrices without the need for pre-filtration. The Raw Water Sampler improves ease of measurement of influent and effluent water streams when used with the two-stream inlet configuration and handles grab samples without changing sample inlet configuration or removing the instrument from the continuous sample source.
- The high-capacity Autosampler enables 24+ hours of unattended sample analysis (63 or 120 sample-position capacity) with either the M5310 C Portable or Laboratory Analyzers.
- DataPro2 software integrates the Autosampler with the M5310 C Laboratory and Portable Analyzers, providing timesaving features to maximize productivity and ensure easy TOC data management.

## faster and smarter to optimize your water treatment process

- Compliant with USEPA Approved Analytical Method (SM 5310C and USEPA 415.3)
- Equipped with standard internal Inorganic Carbon Removal (ICR) module for improved accuracy when analyzing water high in inorganic carbon (IC)
- Autoreagent mode for automatic calculation and implementation of optimal reagent flow rates
- Easily integrated into current plant setup for continuous online measurements or grab mode sampling
- Broad analytical range from 4 ppb to 50 ppm
- Twice-as-fast as Sievers' last generation TOC Analyzers, now with two-minute TOC analysis
- Improved user-friendly, dashboard-style, touch-screen interface for simple operation and data review
- At-a-glance consumable status
- Streamlined, faster system protocols
- Informative error and alert messages for simplified troubleshooting
- Secure database structure for improved data searches and queries

## Sievers Certified Plus

Protect your TOC analyzer investment with Certified Plus genuine products and expert services. From start up, preventative maintenance, and warranties to aftermarket consumables such as reagent packs, standards, and vials, Certified Plus ensures a reliable and accurate TOC measurement solution. For more information on how to order anything and everything you need to keep you up and running, please visit [www.sieversinstruments.com](http://www.sieversinstruments.com)

	Laboratory	Online	Portable
Autosampler/DataPro2	X		X
iOS		X	X
Pre-Filter Kits		X	X
Two-Stream Inlet		X	
Raw Water Sampler		X	X

## toc standards

Sievers\* Certified reference materials represent a comprehensive offering of ready-to-use TOC standards for calibration and verification. Our large-scale production capabilities provide substantial cost advantages over in-house preparation, and our expertise in preparing and storing standards allows us to guarantee the accuracy and extended shelf life of Sievers\* Standards, even at low concentrations.

## comprehensive technical support

As the world's leading manufacturer of TOC analyzers, we continuously strive to exceed expectations by providing superior technology, design, quality, and service. Our team provides ongoing phone and electronic technical support as well as onsite installation, maintenance, calibration, and training services.



# system specifications

	M5310 C Laboratory Analyzer	M5310 C On-Line Analyzer	M5310 C Portable Analyzer
<b>operating specifications</b>			
Range	4 ppb to 50 ppm		
Precision	<1% RSD		
Accuracy	± 2% or ± 0.5 ppb, whichever is greater		
Sample Type	Autosampler or discrete grab sample and TOC removal grab	On-line continuous or discrete grab sample, on-line timed, TOC removal on-line, TOC removal grab	On-line continuous, Autosampler, or discrete grab sample, on-line timed, TOC removal grab
Display Readout	3 significant digits		
Calibration	Typically stable for 12 months		
Analysis Time	2 minutes		
Sample Temperature	5-60°C (41-140°F)		
Ambient Temperature	5-40°C (41-104°F)		
Sample Pressure	N/A	100 psig	
On-Line Flow Rate	N/A	>50 mL/min (for on-line mode)	
Instrument Sample Flow Rate	0.5 mL/min		

<b>analyzer specifications</b>			
Inlet(s)	N/A	One stream, or 2-stream inlet (option)	One stream
Outputs	USB device port (1), USB host ports (2), Modbus TCP/IP	4-20 mA outputs (3); alarm outputs (4); binary input (1); USB device port (1), USB host ports (2); Modbus TCP/IP	
Display	7" WVGA 800x480 pixel, Color LCD w/ touch-screen		
Power	100 – 240 V~, 50 – 60 Hz, 100 VA		
Fuses	Replace with same type and size fuse: T 1.6 A 250 VAC Fuse (Slow Blow), size 5 x 20 mm appliance inlet		
Dimensions	H: 42.2 cm (16.6 in.); W: 24.6 cm (9.7 in); D: 40.0 cm (15.8 in)	H: 54.9 cm (21.6 in); W: 45.0 cm (17.7 in); D: 26.5 cm (10.4 in)	H: 39.5 cm (15.4); W: 22.9 cm (9.0 in); D: 46.4 cm (18.3 in)
Weight	10 kg (22 lb)	16.2 kg (35.6 lb)	9.8 kg (21.6 lb)
Enclosure Rating	N/A	IP-45	IP-21
Safety Certifications	ETL, CE		

<b>environment</b>	
Maximum Relative Humidity	0 - 95%, non-condensing
Maximum Altitude	3,000 m (9,800 ft)
Pollution Degree	2

 The UV lamp inside this product contains mercury and must be recycled or disposed of in accordance with local, state, and federal laws.

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