



**SOLE SOURCE PURCHASE REPORT**

To: Purchasing Officer

From: Shawn Hardeman, Water Quality Laboratory Program Manager

Date: 8/27/2019

1. Name and address and contact information of supplier:

Brian Frashier, (469) 969-5140, brian.frashier@suez.com  
Suez WTS Analytical Instruments, Inc.  
6060 Spine Road  
Boulder, CO 80301, United States  
(303) 444-2009

2. Goods and/or services to be purchased:

M5310 C Lab TOC Analyzer, ICR (PRD 77120-01)  
M-Series USB Autosampler (PRD 77001-01)  
Trade-in Credit

3. Estimated total dollar amount of expenditures pursuant to this request: \$ 28,895.00

4. Term for which goods and/or services will be purchased pursuant to this request (mark only the option which applies):

- a.  \_\_\_\_\_ Years/Months/Weeks/Days (circle one)
- b.  This is a one-time sole source purchase, to be completed within the next fiscal year.

5. Identify the specific circumstances that require a sole source purchase of the goods and/or services requested:

a. Brief description of the purpose of the goods or services to be purchased:

This laboratory instrument will be used by Water Quality Laboratory (WQL) personnel to measure total organic carbon (TOC) in support of drinking water distribution systems monitoring program for the Water Utility. This instrument will also be used to monitor water quality of the WQL's deionized water system. This instrument will be replacing in-kind the existing TOC analyzer that has been in service at WQL since February 21, 2008.

b. Reasons for need of goods and/or services from the specific supplier. Any one reason, by itself, does not necessarily justify a sole source purchase (mark all that apply):

- i.  A diligent inquiry failed to identify any source for the same or similar goods and/or services that will substantially accomplish the same or similar functions to those provided by the source identified above. If so, identify which of the following steps were taken to establish a good-faith review of available alternative sources and provide written justification verifying the actions below were taken (mark all that apply):

- 1.  Contacted various suppliers of similar goods to discuss alternative options;

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- 2.  Performed product research for potential alternative sources;
- 3.  Consulted with subject matter experts to identify potential alternative sources;
- 4.  Other (specifically describe any actions taken, attach additional sheets if necessary):

(Inability to locate other sources via internet search will not suffice as acceptable due diligence.)

- ii.  The goods and/or services offered are unique or proprietary in form, fit, and function. If so, describe the unique or proprietary qualities of the goods and/or services; if available, provide documentation of their unique or proprietary nature, e.g. evidence of patent/copyright/secret processes/limited rights in data (attach additional sheets if necessary):

The technology used by this manufacturer includes a membrane technology that allows for greater sensitivity and specificity in TOC results as described in the sole source letter provided by Suez.

- iii.  Use of goods and/or services from sources other than an Original Equipment Manufacturer will require substantial modification to equipment or systems currently in use, resulting in substantial duplication in cost to the Water Authority that is not expected to be recovered through competition and/or unacceptable delays in fulfilling the Water Authority's requirements. If so, describe the modifications, potential costs, and/or delays associated with making substitute goods and/or services compatible with current equipment or systems (attach additional sheets if necessary):

The Suez TOC analyzer does not require the use of lab gas or deionized water for analysis, removing the potential source of contamination.

- iv.  The procurement requires a specific supplier of goods or services. If so, identify one or more of the following reasons and provide written justification verifying that the statement below is true:
  - 1.  Limited availability of goods or services;
  - 2.  Proven quality, accuracy, and/or dependability;
  - 3.  Compatibility considerations;
  - 4.  Safety considerations;
  - 5.  Warranty issues or guarantee of parts performance;
  - 6.  During the system design process, several alternatives were evaluated and the current proprietary process was selected;
  - 7.  Other (specifically describe any other reasons, attach additional sheets if necessary):

This instrument does not require storage or use of pressurized gas for analysis there by reducing safety consideration and additional operating cost. The Water Quality Laboratory familiar with Suez's products and services, having been a customer for the past 11 years.

- v.  The goods and/or services cannot be purchased by the Water Authority from any other supplier, e.g. the supplier has a protected territory established by the original producer of the goods or services. If so, attach written documentation from the original producer verifying the availability of sources for goods and/or services.

**SOLE SOURCE PURCHASE REPORT**

6. Describe the reasons the purchase is in the public's interest (attach additional sheets if necessary):

Replacing this equipment in-kind will aid in transitioning laboratory personnel between analyzers, reducing downtime and continue providing a level of service to our clients. The current analyzer has been in service for 11 years and WQL is familiar with working with Suez customer service and their products. This instrument is needed to drinking water distribution system monitoring and water quality checks at WQL for microbiological analyses.

7. Attach negotiated cost or fee schedule, as applicable, along with evidence confirming that the price is most advantageous to the Water Authority.

**Requirement:**

At least fifteen days before a sole source contract is awarded, the Central Purchasing Office shall post this notice of intent to award any sole source contracts for goods, services, or construction, on its website.

Any qualified potential contractor may protest an intent to award a sole source procurement to the Central Purchasing Office. The protest shall be submitted in writing within fifteen calendar days of the notice of intent to award a contract being posted by the Central Purchasing Office.

The signature below certifies that this justification is accurate and complete to the best knowledge and belief of the individuals signing:

Requestor's Signature:

  
Title: WQL Program Manager Date 8/28/19

Signature Acknowledgement from the Division Manager:

  
Division Manager Date 8/29/19

Review and Verification by Purchasing Officer:

  
Purchasing Officer Date 8/30/19



Water Technologies & Solutions  
Analytical Instruments

18 June 2018

Re: Sole Source of TOC Membrane Technology

To whom it may concern:

SUEZ WTS Analytical Instruments is the sole source for the membrane-based technology to measure TOC. We hold the following patents:

US 6.228.325

US 5.902.751

US 5.820.823

US 5.798.271

US 5.750.073

US 5.443.991

US 5.132.094

These patents relate to the core membrane technology that differentiates the Sievers 800, 400, 500, 900 and M9 series TOC analyzers from other TOC monitoring technologies, including other technologies also produced by SUEZ WTS AI. The membrane technology is responsible for the elimination of matrix interferences, greater specificity and greater sensitivity in the measurement of TOC. The benefits of this science-based methodology have been documented in numerous independent, peer-reviewed published papers available on [www.sieversinstruments.com](http://www.sieversinstruments.com).

These core patents expired in 2010, but no other vendor currently offers membrane-based TOC measurement technology. The confidential, but not patented, manufacturing know-how necessary to produce a membrane-based TOC analyzer is as critical to the performance of the analyzer as is the patented methodology.

SUEZ WTS AI is also the sole source for measurement technology that simultaneously measures TOC and Stage 1 Conductivity that is compliant with USP, EP and other global pharmacopoeia regulations. Additionally, the Stage 1 Conductivity measurement requires a proprietary coating on the glass sample vials so as to eliminate measurement interferences, and SUEZ WTS AI is currently the sole source provider of those vials for simultaneous TOC and Conductivity measurement.



Lastly, SUEZ WTS AI holds patents relating to our online TOC and Conductivity sampling and standards analysis technology. We hold the following active patents; no other vendors can provide this technology:

US 5837203

US 5976468

US 6271043

US 7247498

US 8003048

Please feel free to contact me if you have further questions or concerns,

Best Regards,

A handwritten signature in blue ink, appearing to read "Mark Hill".

SUEZ WTS Analytical Instruments



SUEZ WTS Analytical Instruments, Inc.  
 6060 Spine Road  
 Boulder, CO 80301, United States  
 T 1 (303) 444-2009

## Quotation

<b>ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY</b>	Date:	Thursday, August 22, 2019
Shawn Hardeman	Quote Number :	UPW-00022395-19-3
Albuquerque, NEW MEXICO	Payment Terms:	Net 30, Subject to Credit Approval
UNITED STATES	Delivery Terms:	Ex Works, Boulder, CO USA
Phone : +1 (505) 289-3481	Expiration Date:	Saturday, October 19, 2019
	Currency:	USD
	Shipment:	30 Days

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	Product Number	Unit Price	Qty	Ext. Price
<b>Group 1</b>				
<b>M5310 C Lab TOC Analyzer, ICR</b>	<b>PRD 77120-01</b>	<b>23,980.00</b>	<b>1</b>	<b>23,980.00</b>
M5310 C Laboratory TOC Analyzer with integrated ICR for monitoring TOC in municipal drinking waters, ranging from raw surface waters to finished drinking waters. INSTRUMENT NOT DESIGNED OR INTENDED FOR PHARMACEUTICAL APPLICATIONS. Included with analyzer: 300mL acid container, 150mL oxidizer container, Accessory Kit, Quick Start Guide, 12-Month Factory Warranty, and integrated ICR: Inorganic Carbon Remover (ICR). Used for removing high levels of Inorganic Carbon, improving instrument performance in applications where there is a high ratio of IC/TOC.				
<b>M-Series USB Autosampler</b>	<b>PRD 77001-01</b>	<b>11,565.00</b>	<b>1</b>	<b>11,565.00</b>
M-Series USB Autosampler using 40 mL vials. Accommodates 63 sample vials via three 21-position metal vial racks, 6-position standards rack to hold Certified Reference Standards. AS Accessory Kit is included with the following contents: needle, needle tubing, probe guide, DataPro2 software, USB cables, and power cord.				
<b>Sub-Total USD :</b>				<b>35,545.00</b>
<b>Group 2</b>				
<b>Instrument Trade In</b>	<b>TRADE IN</b>	<b>(3,500.00)</b>	<b>1</b>	<b>(3,500.00)</b>
Trade-in allowance - By accepting this trade-in offer the trade-in analyzer will become the property of Analytical Instruments 90 daysafter delivery of the new instrument. Buyer is responsible for packaging and shipping the trade-in analyzer to Analytical Instruments within 90 days of receipt of thenew analyzer.				
<b>Instrument Trade In</b>	<b>TRADE IN</b>	<b>(3,500.00)</b>	<b>1</b>	<b>(3,500.00)</b>
Trade-in allowance - By accepting this trade-in offer the trade-in analyzer will become the property of Analytical Instruments 90 daysafter delivery of the new instrument. Buyer is responsible for packaging and shipping the trade-in analyzer to Analytical				

Please refer to UPW-00022395-19 on your purchase order and email to Sievers.instruments.wts@suez.com

Standard Terms and Conditions apply. Warranty valid in UNITED STATES only.

SUEZ WTS Analytical Instruments Inc.

# Quotation

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Product Number	Unit Price	Qty	Ext. Price
Instruments within 90 days of receipt of the new analyzer.			
<b>Sub-Total USD:</b>			<b>-7,000.00</b>

<b>Group 3</b>				
<b>Freight</b>	<b>FREIGHT</b>	<b>350.00</b>	<b>1</b>	<b>350.00</b>
<b>Sub-Total USD:</b>				<b>350.00</b>

**Grand Total USD : 28,895.00**

## Optional Items :

Product Number	Unit Price	Quantity	Ext. Price
<b>1st Year Cert+ M-series Muni/Semi</b> SER 77011-01	<b>4,027.00</b>	<b>1</b>	<b>4,027.00</b>
1st Year Certified+ for M-series TOC Models for Municipal and Semiconductor installations. First year piece of mind coverage includes: Instrument Start-up & initial instruction, Upgrade to on-site manufacturer's warranty, 1 UV Lamp, 3 oxidizer cartridges, 1 acid cartridge, verification standards and a 6mo PM service by a Factory Certified Engineer with additional "tips and tricks" training. Ninemonths consumables, warranty parts, application guidance, unlimited technical support, firmware updates, labor and travel expenses are included during the first year. On-site warranty upgrade insures analyzer is fixed on-site during the manufacturer's warranty period. On-site warranty response is typically 5-7 Days from a vetted TechSupport call.			
<b>M-Series Start-up, Muni/Semi Only</b> SER 77014-01	<b>2,019.00</b>	<b>1</b>	<b>2,019.00</b>
Available for the M-Series Laboratory, On-line, and Portable analyzers for Municipal and Semiconductor installations only. Upon completion of analyzer's installation as per manufacturer's plumbing and electrical specifications Suez WTS Analytical Instruments personnel will verify the functionality of the instrument's software and hardware, and conduct equipment overview including instrument theory, operation, maintenance, and user's tips. Additional time will be billed at on-site hourly rate. Travel expenses for Suez WTS Analytical Instruments personnel are included.			
<b>Add-On - M5310 C ICR</b> SER 77044-01	<b>544.00</b>	<b>1</b>	<b>544.00</b>
This service includes replacement of the ICR degasser once every 2 years. A verification check is performed annually, assuring ICR functionality. This product is only sold in conjunction with an analyzer Preventive Maintenance service. In the event that repair services are required during the validity period, the associated accessory is also entitled to a 10% discount on labor and/or parts.			
<b>TOC Sample Vials, 40 mL 72/cs</b> HMI 90707-01	<b>151.00</b>	<b>1</b>	<b>151.00</b>

Please refer to UPW-00022395-19 on your purchase order and email to [Sievers.instruments.wts@suez.com](mailto:Sievers.instruments.wts@suez.com)

Standard Terms and Conditions apply. Warranty valid in UNITED STATES only.

SUEZ WTS Analytical Instruments Inc.



**WTS Analytical Instruments, Inc.**  
6060 Spine Road Boulder, CO 80301

## STANDARD TERMS & CONDITIONS FOR SALE & SERVICE OF INSTRUMENTS

These Terms and Conditions are an integral part of each agreement between a SUEZ WTS Analytical Instruments company ("Seller") and its customer ("Purchaser") for the sale of instruments ("Instruments") and any related services ("Services"). Such agreement and these Terms and Conditions are collectively referred to as the "Agreement".

1. **Proposals & quotations.** For avoidance of doubt, Seller may refrain from accepting any purchase order until completion of Seller's due diligence process for a new customer. Moreover, if concerns are identified by Seller during this process, Seller reserves the right, in Seller's sole discretion, to refuse any associated purchase orders pending Seller's resolution of such concerns. Any proposals or price quotations may be modified or withdrawn by Seller at any time prior to acceptance by Purchaser. All prices quoted by Seller are F.O.B. point of origin unless otherwise indicated. Any Services performed by Seller beyond those set forth in its proposal will be charged at Seller's then standard rates, plus expenses.
2. **Warranties.** Seller warrants for a period of twelve months after shipment that Instruments manufactured by Seller will conform in all material respects to any descriptions or specifications included in the Agreement and will be free of defects in materials and workmanship. If the Instruments are installed by Seller, the warranty will be extended to twelve months after the installation date or thirteen months after shipment, whichever occurs earlier. Any performance warranties set forth elsewhere in the Agreement shall be limited to twelve months unless otherwise indicated. Components and materials of the type that need replacement periodically due to normal wear and tear such as valves, reaction chambers, catalysts, and parts whose contact with sample streams renders them unsuitable for further use are warranted against defects only as of the shipment date, unless expressly stated otherwise. Warranties do not apply to damage or wear resulting from accidents, negligence, abuse, or misuse by Purchaser or third parties; from failure to follow Seller's instructions for installation, operation or maintenance; or from alterations or repairs not performed in accordance with Seller's instructions. Seller warrants that any Services will be performed in a good and workmanlike manner. Purchaser shall promptly notify Seller of any warranty claim, and Purchaser's sole remedy shall be (at Seller's election) the repair or replacement of defective Instruments, the correction of deficient Services, or the refund of payments made for such Instruments or Services. If Seller, at its discretion, chooses to repair an Instrument subject to a warranty claim, seller may install or otherwise utilize parts or components that are either new, refurbished, remanufactured, or reconditioned in connection with that repair. Similarly, if Seller chooses to supply Purchaser with a replacement Instrument in response to a warranty claim, the replacement Instrument may contain either new, refurbished, remanufactured, or reconditioned parts or components. Purchaser shall not return Instruments to Seller without Seller's prior permission. THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND SELLER MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OTHER THAN AS EXPRESSLY STATED IN THIS AGREEMENT.
3. **Environmental Health and Safety.** Instruments must be installed to allow safe access and service by SUEZ employees per applicable regulatory requirements. Emergency egress, surrounding hazards and ergonomics should be considered, please contact the SUEZ Field Service Leader with questions prior to installation.
4. **Payment.** Seller's obligation to ship Instruments shall be subject to approval of all orders by Seller's credit department, and Seller may require full or partial payment in advance. All payment shall be made in full in lawful, free and unblocked U.S. Dollars. Payments not made within agreed upon terms will bear interest at the rate of 1.5 percent per month or, if lower, the maximum lawful rate. If Purchaser disputes any portion of an invoice, it shall notify Seller in writing with specificity and pay the undisputed portion within said 30-day period. Purchaser shall reimburse costs, including reasonable attorneys' fees, incurred by Seller to collect overdue amounts.
5. **Limitation of liability.** The aggregate liability of Seller and its affiliates and employees in connection with the Agreement and all Instruments and Services provided thereunder shall be limited to the amount actually paid by Purchaser to Seller for such Instruments or Services. Seller shall not be liable for any special, indirect, incidental, consequential, or punitive damages, including lost profits, loss of use, and claims by third parties.
6. **Export.** If Instruments are to be shipped to a point outside the U.S., Seller's obligation is subject to its ability to obtain, on acceptable terms, any applicable export licenses or permits.
7. **Inspection.** Purchaser or its designated representative shall be given a reasonable opportunity, upon request, to inspect Instruments, at Purchaser's cost, prior to their delivery to the carrier for shipment. Failure to make prompt inspection will be deemed a waiver of Purchaser's right of inspection.
8. **Taxes.** Purchaser shall pay all sales, use and excise taxes, customs duties, and similar taxes and governmental charges now or hereafter imposed on either party based on the sale, shipment or use of Instruments or the provision of Services.





## WTS Analytical Instruments, Inc.

6060 Spine Road Boulder, CO 80301

9. **Shipping, title & risk of loss.** Purchaser is responsible for all shipping costs and insurance except as expressly agreed in writing. Purchaser shall give Seller complete shipping instructions, in the absence of which Seller shall be entitled to select the carrier. Title and risk of loss shall pass to Purchaser upon delivery of Instruments to the carrier for shipment, although Purchaser grants Seller a security interest in all Instruments until Seller is paid in full.
10. **Export Import Regulations.** Purchaser will not, directly or through an intermediary, export any Instruments (including related technology and information) to any country that is subject to embargo or similar restrictions under U.S. Export Regulations (including but not limited to Cuba, Iran, Iraq, Libya and North Korea), or transfer them to a national of any such country or to any other person or company restricted from receiving them, or put them to a prohibited end use, or transfer them with knowledge or reason to believe that they are intended for a prohibited destination, recipient or use. If Purchaser exports Instruments from the U.S., then Purchaser assumes the sole responsibility to confirm that the technical regulations and standards for the importation of such Instruments into the applicable country of import are met.
11. **Force majeure.** Seller will not be responsible for any delays, damages or failures to perform due to circumstances beyond its reasonable control, including those caused by Purchaser. Seller's time for performance shall be extended by a period of time commensurate with the amount of delay caused by such circumstances.
12. **Patents.** Seller shall hold Purchaser harmless against any claims by third parties that Instruments manufactured by Seller infringe U.S. patents, provided that Purchaser gives Seller prompt notice of such claim, full authority to defend against such claim, and whatever assistance Seller reasonably requests. The foregoing obligation does not apply to claims related to Instruments based on designs and/or specifications provided by Purchaser, Purchaser's alteration of Instruments, Purchaser's use of Instruments for a purpose not intended by Seller, or Purchaser's use of Instruments in combination with goods not manufactured by Seller, in which cases Purchaser shall hold Seller harmless against any claims of patent infringement made against Seller. If Purchaser's use of the Instruments is enjoined, Seller within a reasonable period of time shall (at Seller's election) obtain rights for Purchaser's continued use of the Instruments, modify the Instruments so they are non-infringing, replace the Instruments with non-infringing Instruments, or refund the then fair market value of the Instruments (before taking into account the alleged infringement) upon return of the Instruments to Seller. Seller shall have no liability with respect to patents outside the U.S.
13. **Documents.** All documents furnished by Seller in connection with Instruments shall remain the property of Seller, and Purchaser warrants that they will not be used or disclosed except to enable Purchaser's installation, operation and maintenance of Instruments.
14. **Complete agreement.** These Terms and Conditions, together with any other contract documents signed by both parties (other than any terms on Purchaser's order that are inconsistent with these Terms and Conditions), constitute the entire agreement between the parties. The Agreement may be modified or amended only by a writing signed by an authorized representative of the party against which enforcement is being sought.
15. **Miscellaneous.** The Agreement is governed by the laws of The State of Colorado, U.S.A.

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.

This information herein may be subject to change without notice and is provided for general guidance only. The dimensions and performance of systems, products and services may vary. Pictures are for example purposes and not to scale. All legal obligations are exclusively as set out in contractual documents. Nothing contained herein constitutes a representation, warranty or undertaking.



6060 Spine Road  
Boulder, CO 80301-3687 USA  
T +1 800 255 6964  
T +1 303 444 2009  
F +1 303 527 1797  
[www.sieversinstruments.com](http://www.sieversinstruments.com)



Find a contact near you by visiting [www.sieversinstruments.com](http://www.sieversinstruments.com) and clicking on "Contact Us".

\* Trademark of SUEZ; may be registered in one or more countries.

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## Sievers® M5310 C TOC Analyzers



### Category Description:

Sievers® M5310 C Total Organic Carbon (TOC) Analyzers are designed for the drinking water industry and environmental water quality monitoring. Offering an operating range of 4 ppb to 50 ppm, these analyzers are engineered to support disinfection byproduct compliance. Sievers M5310 C uses UV persulfate oxidation with membrane conductivity detection, making it compliant with SM 5310 C and US EPA 415.3. Meet regulatory goals and optimize treatment processes. *Available models: On-line, Portable, and Laboratory*

### Feature:

- Provides readings in only two minutes
- Simple and intuitive
- Automated calibration, verification, and data analysis enable unattended operation
- Automatically calculates percent TOC removal for influent and effluent streams or samples

## Sievers® M5310 C Laboratory TOC Analyzer



### Description:

Sievers® M5310 C Laboratory Total Organic Carbon (TOC) Analyzers are designed for the drinking water industry and environmental water quality monitoring. The analyzer is easy to use and maintain. It offers the ability to be used for single grab samples or with the Sievers Autosampler. The Sievers M5310 C Lab is engineered to support disinfectants and disinfection byproducts rule (DBPR) compliance, with an operating range of 4 ppb to 50 ppm.

### Specifications:

- Range: 4 ppb to 50 ppm
- Precision: < 1% RSD
- Accuracy:  $\pm 2\%$  or  $\pm 0.5$  ppb, whichever is greater
- Display Readout: 3 significant digits
- Sample Type: Autosampler or discrete grab sample
- Calibration: Typically, stable for 12 months
- Analysis Time: 2 minutes
- Sample Temperature: 5–95 °C (41–203 °F)
- Ambient Temperature: 5–40 °C (41–104 °F)
- Instrument Sample Flow Rate: 0.5 mL/min

### Features:

- Provides readings in only two minutes
- Automated calibration, verification, and data analysis enable unattended operation
- Automatically calculates percent TOC removal for influent and effluent streams or samples
- Can be used with the high-capacity Sievers Autosampler
- The Autoreagent feature automatically establishes optimal flow rates for each sample
- Pre-calibrated for simple installation
- Minimal maintenance — typically just a few hours per year
- 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 or Modbus TCP/IP output

## Sievers® M5310 C On-Line TOC Analyzer



### Description:

The Sievers® M5310 C On-Line Total Organic Carbon (TOC) Analyzer offers both continuous and discrete grab samples with dual-stream capabilities. Online capabilities allow for real-time monitoring, while the Integrated On-Line Sampling System (IOS System™) allows for the introduction of external samples. Offering an operating range of 4 ppb to 50 ppm, this analyzer is engineered to support regulatory compliance and processes optimization goals

### Specifications:

- Range 4 ppb to 50 ppm
- Precision < 1% RSD
- Accuracy  $\pm 2\%$  or  $\pm 0.5$  ppb, whichever is greater
- Display Readout 3 significant digits
- Sample Type On-line continuous or discrete grab sample, timed on-line, TOC removal on-line, TOC removal grab
- Calibration Typically stable for 12 months
- Analysis Time 2 minutes
- Sample Temperature 5–95 °C (41–203 °F)
- Ambient Temperature 4–40 °C (41–104 °F)
- Sample Pressure Up to 100 psig
- Required Sample Line Flow Rate >50 mL/min (for on-line mode)
- Instrument Sample Flow Rate 0.5 mL/min

### Features:

- Provides readings in only two minutes
- Automated calibration, verification, and data analysis enable unattended operation
- Automatically calculates percent TOC removal for influent and effluent streams or samples
- The Autoreagent feature automatically establishes optimal flow rates for each sample
- The grab-mode, alphanumeric labeling feature allows individual labeling of each grab sample for easy recall
- Pre-calibrated for simple installation
- Minimal maintenance — typically just a few hours per year
- 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
- Integrated On-Line Sampler (IOS) system allows testing of external samples and standards without removing the analyzer from the continuous water source
- Two-stream sample line configuration enables efficient sampling of two independent sample sources, without the need to alter the initial inlet setup



## Sievers® M5310 C Portable TOC Analyzer



### Description:

The Sievers® M5310 C Portable Total Organic Carbon (TOC) Analyzer is the most versatile of the M5310 C series. Its light weight and compact design makes it a powerful troubleshooting analysis tool that can be used for single grab samples, in autosampler mode, or in a process stream for continuous on-line TOC measurement. Offering an operating range of 4 ppb to 50 ppm, this analyzer is engineered to support regulatory compliance and processes optimization goals.

### Specifications:

- Range 4 ppb to 50 ppm
- Precision < 1% RSD
- Accuracy  $\pm 2\%$  or  $\pm 0.5$  ppb, whichever is greater
- Display Readout 3 significant digits
- Sample Type On-line continuous, Autosampler, or discrete grab sample, timed on-line, TOC removal on-line, TOC removal grab
- Calibration Typically stable for 12 months
- Analysis Time 2 minutes
- Sample Temperature 5–95 °C (41–203 °F)
- Ambient Temperature 5–40 °C (41–104 °F)
- Sample Pressure 100 psig
- Required Sample Line Flow Rate >50 mL/min (for on-line mode)
- Instrument Sample Flow Rate 0.5 mL/min

### Features

- Provides readings in only two minutes
- Simple and intuitive
- Automated calibration, verification, and data analysis enable unattended operation
- Automatically calculates percent TOC removal for influent and effluent streams or samples
- The Autoreagent feature automatically establishes optimal flow rates for each sample
- Pre-calibrated for simple installation
- Minimal maintenance — typically just a few hours per year
- 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
- IOS system allows testing of external samples and standards without removing the analyzer from the continuous water source. The grab-mode, alphanumeric labeling feature allows individual labeling of each grab sample for easy recall