

### Sievers certified reference materials and consumables

For more than 20 years, thousands of customers worldwide have relied on the Sievers brand of Total Organic Carbon (TOC) Analyzers, certified reference materials (Sievers Standards), and consumables for their critical TOC measurement needs. As the recognized world leader in designing and manufacturing TOC measurement technology, Sievers products combine this expertise with the renowned Six Sigma methodology to ensure the finest quality in standards and consumables. Now, as part of SUEZ, Sievers standards and consumables provide unmatched performance and reliability in the marketplace.

SUEZ's ready-to-use standards are designed for calibration, validation, system suitability, and compendial test applications, and can be used with most other TOC analyzer brands. We also offer certified (<10 ppb) TOC vials, TOC sample vials for process monitoring, consumables, and replacement parts for Sievers TOC Analyzers.



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### Sievers standards benefits

#### **Certified and Traceable**

With extensive expertise in supporting the pharmaceutical market, SUEZ understands how critical compliance and traceability are when using analytical standards. Documentation for our certified and traceable Sievers reference materials is important in supporting your data and building confidence in your measurement results. To provide a base for your internal documentation needs, we supply a Certificate of Analysis with each standard that documents source material traceability, the accuracy of the solution, and the statistical uncertainty of measurement associated with production.

To provide our customers with the highest level of confidence and the traceability they need, Sievers standards are prepared from the highest purity raw materials available. Source materials for system suitability standards are traceable to the United States Pharmacopoeial Convention (USP). Materials for Japanese Pharmacopoeia testing comply with the required specifications for purity. Other standards for calibration and validation are traceable to National Institute of Standards and Technology (NIST) Reference Materials. In addition, laboratory equipment and glassware are traceable to NIST.

#### **Stringent Quality Control**

SUEZ makes continuous advancements in the materials science, contamination control procedures, automated processes, and clean room conditions required to produce sensitive, low-level reference materials and consumables. SUEZ:

- Prepares Sievers standards in accordance with USP Chapter <643>, USP Chapter <645>, EP Method <2.2.44>, and JP Method <2.59>.
- ISO/IEC 17025 and ISO 17034 accreditations\*\*
   ensure reference materials are consistently
   produced, controlled, and audited to robust quality
   standards.



# Certificate of Analysis Sievers Certified Reference Material

System	Suitability + 1 ppm KHP Set		
r: STD 90052-01			
18004-0	065		
Total Organic Carbon Analyzer Testing			
Store at	5 ± 4°C		
31 Aug 2	2018		
01 Mar 2	01 Mar 2018		
	Certified Value	Uncertainty (ppb)	Measured Value (ppb)
TD 74000	<50 ppb <0.15 μS/cm @ 25 °C	±4.6	19.9
	Certified Value	Expanded Uncertainty	Raw Material Lot
TD 74054	500 ppb as USP Sucrose	±3.2 %	R04311
TD 74058	500 ppb as USP 1,4- Benzoquinone	±2.8 %	I0L535
TD 74100	1.00 ppm as Potassium Hydrogen Phthalate (KHP)	±2.9 %	C582000
	STD 900 18004-0 Total Or Store at 31 Aug :	18004-0065	STD 90052-01

QC Analyst

Town I Lat

Brianne Broughton

Quality Engineer

BC-MRA ANAB

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DCA 85000-03 Rev A

6060 Spine Road Boulder, CO 80301 T +1 303-444-2009 Page 1 of 2

COA Temp, Cert Reference

<sup>\*\*</sup>Accreditations applicable to standards produced in US and Hungary only. Standards produced in China, within an ISO 9001 certified facility, follow the same QC pass/fail criteria and production processes as the US and Hungary locations.

- Produces Sievers reference materials in an ISO 7 clean room to minimize contamination. This standards manufacturing process is unique to the market.
- Uses only the highest grade raw materials (USP and NIST traceable) available which have undergone rigorous quality control.
- Limits human error by using advanced, customdesigned, automated manufacturing throughout production.

#### Value and Convenience

The SUEZ standards production lab (see page 8) not only allows for the maintenance of the most rigorous TOC standards manufacturing process in the industry but also enables us to produce standards on a large scale. As a result, our customers benefit from significant cost savings. Moreover, Sievers standards are designed to maximize productivity when used with Sievers TOC Analyzers. With no preparation required and an extended shelf life, these ready-to-use materials are available when you need them. With the convenience of overnight delivery and confidence that comes with SUEZ's guaranteed performance, Sievers standards and consumables are the logical choice for your business.

#### Flexible Ordering and Delivery

For your convenience, SUEZ offers several programs and ordering methods to fit your needs. The annual blanket standards order allows you to minimize paperwork and delivery scheduling and save money. With a single purchase order, you can schedule a full year of standards shipments and rest assured they will arrive when needed. North American customers can also take advantage of our web store to conveniently order standards 24/7. (See page 31 for details on ordering.)

Why risk the performance of your critical instrumentation and the quality of measurement when you can rely on Sievers standards?

# Guaranteed Consumables and Replacement Parts

SUEZ provides consumables, reagents, and replacement parts that are certified and designed specifically for our instrumentation.

As the Original Equipment
Manufacturer we provide
warranty options and
guarantees on consumables,
reagents, and parts quality.

# Sievers Standards for all TOC Instruments

The Sievers standards product line is designed for all Sievers TOC instruments, as well as other instrument brands including Shimadzu, OI Analytical, Skalar, and Teledyne-Tekmar. Custom standards are also available on request (See page 20 for additional information.)

## Sievers standards products and applications



#### Calibration and Verification Standards Sets

The purpose of instrument calibration is to minimize bias. Proper calibration is the critical first step to good instrument performance. Sievers certified reference Materials will ensure the optimal calibration of your TOC analyzer per SUEZ recommendations.

SUEZ offers a full line of TOC and conductivity calibration standards for a variety of instruments and applications. For online instruments designed exclusively for high-purity water applications, specially-prepared Sievers conductivity standards are available. For laboratory instruments, such as the Sievers M9, Sievers calibration sets include both inorganic carbon and total carbon standards.

#### **Verification Standards Sets**

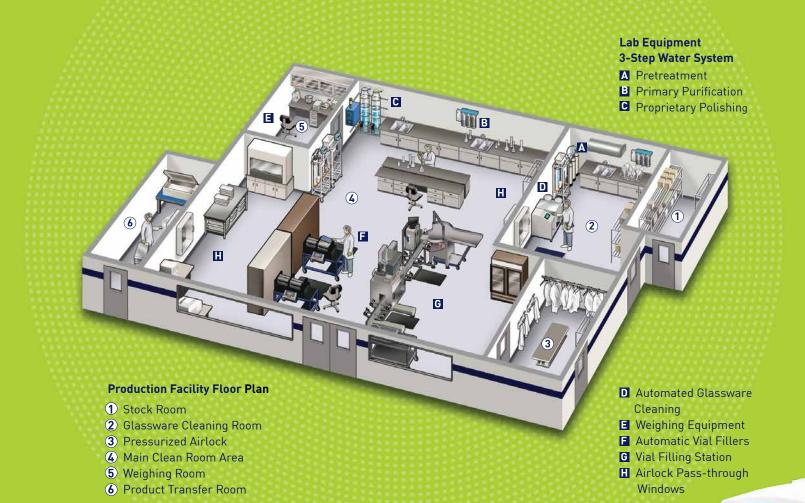
Verification standard sets are typically run if a change is made to the instrument or after maintenance. Calibration curve verification should be conducted on a regular basis with one or more standards within the linear range. SUEZ offers a host of verification standards at concentrations across the operating range to demonstrate the accuracy and precision of the measurement system.



#### Validation Standards Sets

Validation standards are reference materials used for analytical instrument qualification. They help ensure that the measurement system meets specifications and that it is suitable for its intended purpose. Validation is a critical component of a quality management system, cGMPs, and regulatory compliance.

The Sievers validation standards sets comprehensively address LOD, LOQ, linearity, precision, accuracy, specificity, and robustness as detailed in Sievers validation documentation. Each standards set is specifically designed for the individual instrument and its application.



#### **SUEZ Standards Production Lab**

Committed to the highest quality, SUEZ manufactures Sievers standards in a stringent cleanroom environment designed to ISO 7 specifications. Cleanroom and manufacturing processes have been designed to minimize contamination risks at each step in the production of the standards, using rigorous contamination control protocols, proprietary glassware cleaning methods, and custom-designed automated equipment.



Sievers Autosampler

Sievers My Portabl

### Sievers certified reference materials

The Sievers M-Series Analyzers offer unsurpassed ease of use, analytical performance, versatility, and reliability. Designed to meet diverse application needs and regulatory requirements, the M-Series is also fast, smart and versatile, allowing you to reach the peak of productivity. The M-Series is available in nine models—the Laboratory, the On-Line and the Portable versions of the M9 for the pharmaceutical industry, M9e for the semiconductor industry and M5310 C for the municipal water industry.

This section lists the most commonly ordered standards for the M-Series. See page 27—30 for a comprehensive list of Sievers standards.

"We run two shifts in the QC laboratory to support the production of a multimillion dollar drug. We can't afford any mistakes with system suitability testing because it would slow down production. That's why we use Sievers standards."

- Analytical Chemistry Manager, API Manufacturer



### **Sievers M-Series**

How often should I conduct a system suitability test?

The frequency of system suitability testing is at the user's discretion, and really depends on the level of risk the user is willing to accept. Some users do a System Suitability Test before and after each batch, and some do weekly or monthly checks depending on their risk assessment. SUEZ can help you design a test program that meets your internal needs and satisfies compendial requirements.

SUEZ is the first company to offer reference materials to support the Japanese and Korean Pharmacopoeia TOC requirements.



#### **System Suitability and Compendial Standards**

The United States Pharmacopeia (USP) Chapter <643>, European Pharmacopoeia (EP) Method <2.2.44>, Chinese Pharmacopoeia Appendix VIII R, and Indian Pharmacopoeia <2.4.30> require the analysis of sucrose and benzoquinone to demonstrate system suitability for TOC analysis. The Japanese and Korean Pharmacopoeia require the use of SDBS (Sodium dodecylbenzenesulfonate) as the test compound. Through its Sievers product line, SUEZ offers certified reference materials to meet these test needs.

The following are the most frequently used standards. For a full list, see pages 27—30.

#### System Suitability—(40-mL vials)

part #	description applical	bility
STD 31004-01	System Suitability Set  Set includes (1) Rw - Reagent Water Blank, (1) Rs - Standard Solution, and (1) Rss - System Suitability Solution.	М9
STD 77004-01	Sterile Water Suitability  Set includes three vials: (1) Rw - Reagent Water Blank, (1) Rs - 8 mg C/L as USP Sucrose and (1) Rss - 8 mg C/L as USP 1,4  Benzoquinone.	M9
STD 90039-01	SDBS Suitability Set  Standard set to meet Japanese and Korean Pharmacopeia requirements for TOC analysis. This set contains (2) 40 mL glass vial standards: (1) Reagent water and (1) 500 mg C/L as SDBS. SDBS raw material compliant with JP testing requirements.	M9

## **Sievers M-Series (continued)**

### **TOC Calibration Sets**

#### Multi-Point Calibration Set—(40-mL vials)

part #	description	applicability
STD 77000-01	M-Series Multi-Point Calibration Standards Set—40-mL vials	All
	Set includes: (1) Reagent Water Blank, (6) TOC Standards (250 $\mu g$ C/L, 1, 5, 10, 25, 50 mg C/L TOC as KHP), and (1) IC Standards (10 mg C/L IC as Na <sub>2</sub> CO <sub>3</sub> ).	
STD 77014-01	M9, M9 <sup>e</sup> Turbo Multi-Point Calibration Set	M9, M9e
	Set includes: (1) Reagent Water Blank, (5) TOC Standards (250, 500 μg C/L, 1, 3, 5 mg C/L TOC (as KHP) and (1) IC Standard (choice of Low IC Standard and 2 mg c/L IC as Na <sub>2</sub> CO <sub>3</sub> ; both included).	

#### Single Point Calibration Standards Sets—(40-mL vials †)

part #	description	applicability
STD 90001-01	Single Point Calibration Standards Set—1-mg/L Set includes: (1) Reagent Water Blank, (1) 1 mg C/L TOC Standard (as KHP), and (1) 1 mg C/L IC Standard (as Na $_2$ CO $_3$ ).	All
STD 90002-01	Single Point Calibration Standards Set—5-mg/L	All
	Set Includes: (1) Reagent Water Blank, (1) 5 mg C/L TOC Standard (as KHP) and (1) 5 mg C/L IC Standard (as $Na_2CO_3$ ).	
STD 90003-01	Single Point Calibration Standards Set—10-mg/L	All
	Set Includes: (1) Reagent Water Blank, (1) 10 mg C/L TOC Standard (as KHP) and (1) 10 mg C/L IC Standard (as $Na_2CO_3$ ).	
STD 77026-01	M9 Conductivity Calibration Standard	M9, M9e
	Set includes: (1) 1.4 mS/cm (as KCI) in 30 mL specialty Dual Use Conductivity and TOC vial.	



† Unless otherwise stated.

## **Sievers M-Series (continued)**

#### **TOC Verification Sets**

Verification Standards—(40-mL vials †)

part #	description	applicability
STD 90007-01	Single Point Verification Set, 500 μg/L	All
	Set includes: (1) Reagent Water Blank, (1) 500 $\mu g$ C/L TOC Standard (as Sucrose), and (1) 500 $\mu g$ C/L IC Standard (as Na <sub>2</sub> CO <sub>3</sub> ).	
STD 90008-01	Single Point Verification Set, 1 mg/L	All
	Set includes: (1) Reagent Water Blank, (1) 1 mg C/L T0C Standard (as Sucrose) and (1) 1 mg C/L IC Standard (as $Na_2CO_3$ ).	
STD 90009-01	Single Point Verification Set, 2 mg/L	All
	Set includes: (1) Reagent Water Blank, (1) 2 mg C/L T0C Standard (as Sucrose), and (1) 2 mg C/L IC Standard (as $Na_2CO_3$ ).	
STD 90010-01	Single Point Verification Set, 5 mg/L	All
	Set includes: (1) Reagent Water Blank, (1) 5 mg C/L TOC Standard (as Sucrose) and (1) 5 mg C/L IC Standard (as $Na_2CO_3$ ).	
STD 90011-01	Single Point Verification Set, 10 mg/L	All
	Set includes: (1) Reagent Water Blank, (1) 10 mg C/L TOC Standard (as Sucrose) and (1) 10 mg C/L In Standard (as $Na_2CO_3$ ).	C
STD 90031	Municipal TOC Verification Set	M5310 C
	Set Includes: (1) 1 mg C/L, (1) 5 mg C/L and (1) 10 mg C/L TOC Standard (as KHP).	
STD 77015-01	M9, M9° Turbo Verification Set	M9, M9 <sup>e</sup>
	Set includes: (1) Reagent Water Blank, (1) 2 mg C/L TOC Standard (as Sucrose), (1) Low IC Standard and (1) 2 mg C/L IC Standard (as $Na_2CO_3$ ).	i
STD 77200-01	M-Series Autoreagent Verification Set	All
	Set includes: (1) 10 mg C/L TOC Standard (as Sucrose) and (1) 25 mg C/L TOC Standard (as KHP).	
STD 77030-01	M9 Conductivity Verification Standard	M9, M9e
	Set includes: (1) 25 $\mu$ S/cm (as HCI) in 30 mL specialty Dual Use Conductivity and TOC vial.	

<sup>†</sup> Unless otherwise stated.

## **Sievers M-Series (continued)**

#### **TOC Validation Sets**

#### Validation Standards—(40-mL vials)

part #	description	applicability
STD 31013-01	Accuracy/Precision Set, 500 μg/L Set includes: (1) Reagent Water Blank and (1) 500 μg C/L (as USP Sucrose) Standard Solution.	M9, M9e
STD 77013-01	Accuracy/Precision Set, 8 mg/L	M9
	Set includes: [1] Reagent Water Blank and [1] 8 mg C/L (as USP Sucrose) Standard Solution.	
STD 77001-01	M9 Validation Set with Calibration and Verification	М9
	Set includes: (1) Single Point Calibration Set at 1 mg C/L, (1) Single Point Verification Set at 500 $\mu$ g C/L, (2) System Suitability Sets, (1) Linearity Set, (1) Accuracy and Precision Set, (1) Robustness Set, and (1) Specificity Set	
STD 31012-01	Linearity Standards Set	M9, M9e
	Set includes: (1) Reagent Water Blank and (1) each 250 μg C/L, 500 μg C/L, 750 μg C/L as USP Sucrose.	
STD 74409-01	Specificity Standards Set	М9
	Set includes: (1) Reagent Water Blank, (1) 500 $\mu$ g C/L as Methanol, (1) 500 $\mu$ g C/L as Nicotinamide, and (1) 500 $\mu$ g C/L as KHP.	
STD 90037-01	Robustness Standards Set	M9
	Set includes: (1) Reagent Water Blank (Rw), (1) Standard Solution - Rs (500 µg C/L as USP Sucrose), and (1) System Suitability Solution - Rss (500 µg C/L as USP 1,4-Benzoquinone). Rw, Rs, and Rss standards are non-acidified.	m

Certified TOC sample vials are also available for Sievers and other instruments. See page 28 for more information.

### Sievers 500 RL Series

#### **Super Convenient** Integrated Super iOS

With a Super iOS you plug in the combined standards pack, start your protocol, and walk away. Running the standards procedure has been completely automated.

#### **Blanket Order Option**

In addition to a full range of individual standard sets. we offer annual blanket orders at a discount that you can customize to meet your specific needs and have shipped at your desired intervals.

> Sievers 500 RL and 500 RLe On-Line **TOC Analyzers**

The Sievers 500 RL On-Line Total Organic Carbon (TOC) Analyzer is a reagentless analyzer designed to continuously monitor organics in ultrapure water for pharmaceutical, microelectronics, semiconductor, and power applications.

The 500 RL with Super iOS model offers standards unique to the Sievers product line. Our patented and convenient Super iOS vial set cartridges are pre-loaded with Sievers standards and configured for a variety of protocols, including system suitability.

The Super iOS automatically sequences through the various vials for a protocol unattended. The Sievers Super iOS enables the confidence and reliability of lab-based system suitability testing in an online analyzer.

The following are the most frequently used standards. For a full list, see pages 27-30.

### Standards for the 500 RL with Super iOS

System Suitability and Compendial Standards—(40-mL vials †)

part #	description
STD 74503	500 RL System Suitability Set—Super iOS  Set Includes (1) Reagent Water Blank - Rw, (1) Standard Solution - Rs (500 μg C/L as USP Sucrose), (1) Standard Solution - Rss (500 μg C/L as USP 1,4-Benzoquinone), and (1) Rinse Water Standard. Super iOS standards are packaged in 40 mL glass vials, inserted in a vial cartridge for use with the Sievers Super iOS System.
STD 74529-01	500 RL with Super iOS SDBS Suitability Set (TOC)
	Standard set for the Sievers 500 RL TOC Analyzer with Super iOS that meets Japanese and Korean Pharmacopoeia TOC requirements. Set includes: (1) Reagent Water Blank and (1) 500 µg C/L as SDBS standard in 30 mL specialty Dual Use Conductivity and TOC vials. These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.
	STD 74503

<sup>†</sup> Unless otherwise stated.

## **Sievers 500 RL Series (continued)**

### **TOC and Conductivity Calibration Sets**

#### Multi-Point Calibration Set—(40-mL vials)

part #	description
STD 74514	500 RL with Super iOS Multi-Point Calibration Set
	Multi-Point Calibration Set A and B for Sievers 500 RL TOC Analyzer with Super iOS. Set includes: [1] Reagent Water Blank, [3] TOC Standards (500 μg C/L, 1.0 mg C/L, 1.5 mg C/L as KHP) and [1] 25 μS/cm Conductivity Standard (as HCl). These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.

### Single Point Calibration Set—(40-mL vials and 30-mL vials)

part #	description
STD 74501	500 RL with Super iOS Single Point Calibration Set
	Single Point Calibration Set A for Sievers 500 RL TOC Analyzer with Super iOS. Set includes: (1) Reagent Water Blank, (1) 1.5 mg C/L TOC Standard (as KHP) and (1) 25 µS/cm Conductivity Standard (as HCl). These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.
STD 77035-01	Conductivity Standard
	Conductivity Standard for the Sievers 500 and CheckPoint Series. This standard consists of (1) 25 $\mu$ S/cm (as HCl) in a 30 mL specialty Dual Use Conductivity and TOC vial.

### Accuracy/Precision and Verification Set—(40-mL Vials)

part #	description
STD 74502	500 RL with Super iOS Accuracy/Precision and Verification Set
	Accuracy/Precision and Verification Set for the Sievers 500 RL TOC Analyzer with Super iOS. Includes (1) Reagent Water Blank, (1) 500 $\mu$ g C/L TOC Standard (as Sucrose) and (1) 25 $\mu$ S/cm Conductivity Standard (as HCl). These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.
STD 74507	500 RL with Super iOS Accuracy/Precision and Verification Set (TOC Only)
	Accuracy/Precision and Verification Set for the Sievers 500 RL TOC Analyzer with Super iOS. Includes (1) Reagent Water Blank and (1) 500 µg C/L TOC Standard (as Sucrose) packaged in a vial set cartridge for use with the Sievers Super iOS System. Not compatible with 500 RL instruments equipped with the conductivity option.

#### Validation Sets—(40-mL Vials)

part #	description
STD 74513	500 RL with Super iOS Single Point Validation Set
	Validation Standards Set with Single Point Calibration Set A for the Sievers 500 RL TOC Analyzer with Super iOS. Includes: (1) Single Point Calibration Set, (2) Accuracy/Precision and Verification Sets, (1) System Suitability Set, (1) Linearity Set, (1) Robustness Set, and (1) Specificity Set. These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.

## **Sievers 500 RL Series (continued)**

#### Validation Sets (continued)

part #	description
STD 74515	500 RL with Super iOS Multi-Point Validation Set
	Validation Standards Set with Multi-Point Calibration Set A and B for the Sievers 500 RL TOC Analyzer with Super iOS. Includes: (1) Multi-Point Calibration Set, (2) Accuracy/Precision and Verification Sets, (1) System Suitability Set, (1) Linearity Set, (1) Robustness Set, and (1) Specificity Set. These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.
STD 74506	500 RL with Super iOS Linearity Set
	Linearity Set for the Sievers 500 RL TOC Analyzers with Super iOS. Includes (1) Reagent Water Blank and (1) each 250 μg C/L, 500 μg C/L, and 750 μg C/L as KHP. These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.
STD 74509-01	500 RL with Super iOS Specificity Set
	Specificity Set for the Sievers 500 RL TOC Analyzers with Super iOS. Includes (1) Reagent Water Blank, (1) 500 µg C/L as Methanol, (1) 500 µg C/L as Nicotinamide, and (1) 500 µg C/L as KHP. These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.
STD 74508-01	500 RL with Super iOS Robustness Set
	Robustness Standard Set for the Sievers 500 RL TOC Analyzers with Super iOS. Includes (1) Reagent Water Blank - Rw, (1) Standard Solution - Rs (500 µg C/L as USP Sucrose), (1) System Suitability Solution - Rss (500 µg C/L as USP 1,4 Benzoquinone), and (1) Flush Standard. Rw, Rs, and Rss standards are non-acidified and are packaged in 30 ml specialty Dual Use Conductivity and TOC vials. The Flush Standard is non-acidified and packaged in a 40 ml glass vial. These standards are packaged in a vial set cartridge for use with the Sievers Super iOS System.

#### Standards for the 500 RL with Standard iOS

part #	description
STD 74403	500 RL System Suitability Set—Standard iOS
STD 74429-01	500 RL SDBS Suitability Set—Standard iOS
STD 74614	500 RL Multi-Point Calibration Set—Standard iOS
STD 74401	500 RL Single Point Calibration Set A—Standard iOS
STD 74402	500 RL Accuracy/Precision and Verification Set—Standard iOS
STD 74613	500 RL Single Point Validation Set—Standard iOS
STD 74615	500 RL Multi-Point Validation Set—Standard iOS
STD 74406	500 RL Linearity Set—Standard iOS
STD 74408-01	500 RL Robustness Set—Standard iOS
STD 74409-01	500 RL/900 Specificity Set—Standard iOS

### CheckPoint Pharma and CheckPoint<sup>e</sup> OnLine/Portable TOC Sensors



The affordable CheckPoint Pharma and CheckPoint<sup>e</sup> Online/Portable Total Organic Carbon (TOC) Sensors provide unsurpassed flexibility in measuring low-level TOC online for microelectronics, pharmaceutical and power applications. They can be used online for continuous monitoring or hand-carried to any point in a water system for rapid diagnostic sampling and troubleshooting. CheckPoint/CheckPoint<sup>e</sup> is the first and only battery-powered TOC measuring device.

The following are the most frequently used standards for the Check-Point. For the full list of standards, please see page 27—30.

#### System Suitability Standards—(30-mL DUCT vials)

part #	description
STD 31003-04	System Suitability Set
	Set includes: (1) Rw—Reagent Water Blank, (1) Rs—Standard Solution and (1) Rss—System Suitability Solution.

#### TOC and Conductivity Calibration Standards—(30-mL DUCT vials)

part #	description
STD 97010-02	TOC Calibration Set
	Set includes: (1) Reagent Water Blank and (1) 500 $\mu g$ C/L T0C Standard (as Sucrose).
STD 77035-01	Conductivity Standard
	Set includes: Conductivity Standard for the Sievers 500 and Check-Point Series. This standard consists of (1) 25 $\mu$ S/cm (as HCl) in a 30 mL specialty Dual Use Conductivity and TOC vial.

#### Performance Qualification Standards—(30-mL DUCT vials)

part #	description
STD 97006-02	TOC Linearity Set  Set includes: (1) Reagent Water Blank and (1) each of 250 μg C/L, 375 μg C/L, and 500 μg C/L as Sucrose.

## InnovOx Laboratory and On-Line TOC Analyzers



The Sievers InnovOx Laboratory and On-Line Total Organic Carbon (TOC) Analyzers represent a true breakthrough in high TOC measurement technology and reliability. The InnovOx can consecutively handle thousands of common—as well as difficult samples such as brine and cellulose—with unprecedented system uptime. The InnovOx offers unparalleled oxidation robustness, a dynamic linear working range of 0.05 to 50,000 ppm, and calibration curve stability for TOC analysis of process, environmental, and wastewater samples.

The following are the most frequently used standards for the InnovOx. For the full list of standards, please see page page 27—30.

When ordering, please use the applicable part number and quantity.

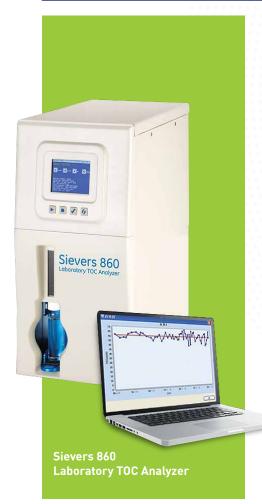
TOC & IC Calibration Standards—(250-mL bottles)

part #	description
STD 68310-01	Calibration—100-mg/L
	Set includes: (1) 250 mL bottle containing 100 mg C/L as KHP.
STD 68410-01	Calibration—1,000-mg/L
	Set includes: (1) 250 mL bottle containing 1,000 mg C/L as KHP.
STD 68450-01	Calibration—5,000-mg/L
	Set includes: (1) 250 mL bottle containing 5,000 mg C/L as KHP.
STD 68520-01	Calibration—20,000-mg/L
	Set includes: (1) 250 mL bottle containing 20,000 mg C/L as KHP.
STD 68100-01	Calibration—Reagent Water
	Set includes: (1) 250 mL bottle containing Reagent Water (<0.1 ppm at preparation).
STD 68620-02	IC Calibration—100 mg/L
	Set includes: (1) 250 mL bottle containing 100 mg C/L as Sodium Carbonate/Bicarbonate.

#### TOC Calibration and Verification Standards—(250-mL bottles)

part #	description
STD 68020-02	Calibration and Verification Kit—0 to 1,000-ppm range
	Set includes: 250 mL bottles with the following standards: Calibration - Reagent Water, 1 mg C/L as KHP, 10 mg C/L as KHP, 25 mg C/L as KHP, 100 mg C/L as KHP, 1,000 mg C/L as KHP. Verification - 50 mg C/L as Sucrose, 500 mg C/L as Sucrose.
STD 68551-01	Calibration and Verification—50,000-mg/L Set includes: (1) 250 mL bottle containing 50,000 mg C/L as Sucrose.

## Sievers 860 Laboratory TOC Analyzers\*\*\*



The Sievers 860 Laboratory TOC Analyzer was developed for general pharmaceutical monitoring of Purified Water (PW) and Water for Injection (WFI). Based on the Sievers 900 Laboratory TOC Analyzer, the 860 Analyzer combines high-quality performance with affordability. It simplifies your day-to-day water testing routines, while giving you confidence in your monitoring results for regulatory compliance. The Sievers RT12 Autosampler was designed for use with the Sievers 860.

Following are the most frequently used standards for the Sievers 860. For the full list of standards, see pages page 27—30.

#### System Suitability and Compendial Standards (40-mL vials)

part #	description
STD 74403	System Suitability Set
	Set Includes (1) Reagent Water Blank - Rw, (1) Standard Solution - Rs (500 μg C/L as USP Sucrose), (1) Standard Solution - Rss (500 μg C/L as USP 1,4-Benzoquinone), and (1) Rinse Water Standard.

#### TOC Calibration Set - Single Point Calibration Set (40-mL vials)

part #	description
STD 74405	Single Point Cal Set A (TOC Only)
	Single Point calibration set A. Includes (2) Reagent Water Blanks and (1) 1.5 mg C/L TOC Calibration Standard (as KHP).

#### Accuracy/Precision and Verification Sets (40-mL vials)

part #	description
STD 74407	Accuracy/Precision and Verification Set (TOC Only)
	Accuracy/Precision and Verification set includes (1) Reagent Water Blank and (1) 500 μg C/L TOC Verification Standard (as Sucrose).

#### Validation Sets (40-mL vials)

To complete the validation protocol for the Model 860 after calibration three standards sets are required.

part #	description
STD 74407	Accuracy/Precision and Verification Set (TOC Only)  Accuracy/Precision and Verification set includes (1) Reagent Water Blank and (1) 500 µg C/L TOC Verification Standard (as Sucrose).
STD 74403	System Suitability Set  Set Includes (1) Reagent Water Blank - Rw, (1) Standard Solution - Rs (500 μg C/L as USP Sucrose), (1) Standard Solution - Rss (500 μg C/L as USP 1,4-Benzoquinone), and (1) Rinse Water Standard.
STD 74406	Linearity Set Linearity set includes (1) Reagent Water Blank and (1) each 250 μg C/L, 500 μg C/L, and 750 μg C/L as KHP.

### Standards for non-Sievers brand TOC instruments

# The convenience of ready-made standards

Producing standards in-house that comply with regulations and quality systems can be a challenge. Organizations must consider and control many variables, such as:

- Technician skill, training, and consistency of performance
- Standard Operating
  Procedure (SOP) adherence
  and development
- Equipment validation and maintenance
- Purity of reagent water
- Purity of raw material
- Use of dedicated glassware and cleanliness of glassware
- Cleanliness of vials
- Documentation development and maintenance for NIST traceability, GLPs, and/or cGMPs

Many organizations have eliminated these variables and the costs, time, and complexity associated with in-house standards production by using Sievers certified reference materials. They benefit from having reliable, ready-to-use standards at hand as needed, eliminating potential production delays and reductions in throughput.

Sievers standards are also compatible with most other laboratory-based TOC analyzers, such as:

- Shimadzu
- OI Analytical
- Skalar
- Teledyne-Tekmar

For more information, please contact us at www.sieversinstruments.com, or see page 31 for other options.

### **Custom reference materials for all TOC instruments**

By utilizing Sievers certified reference standards, SUEZ relieves the burden and risks associated with manufacturing standards, including maintaining required equipment, training, and material supply chain. SUEZ has the expertise to develop and produce custom standards for challenging and unique applications with consistently high quality and on-time delivery. If you need standards that are not listed within this catalog, please contact us.

To fulfill your custom standard set request, please provide the following information:

- Source material (USP/NIST Sucrose, KHP, etc.) and desired concentration
- Instrument make/model for which the standard will be used
- Container container size and type (glass 40 mL vials, for example)
- Order quantity

Please send your request to sievers.customercare.wts@suez.com, or see page 31 for other contact options.

## **TOC Sample Vials, Containers, and Cleaning Validation Kits**

Increasing costs, time, and regulatory pressures have made it essential for companies to obtain accurate Total Organic Carbon (TOC) results with the first analysis. Companies simply cannot afford to repeat analyses that have been compromised due to vial contamination. Through its Sievers product line, SUEZ offers pre-cleaned TOC vials designed to give you confidence in the quality of your TOC measurements. These vials are reliable, economical, and scrupulously cleaned and certified to be below 10 ppb.

The following are the most frequently used vials.

For the full list of consumables, reagents and replacement parts, please see page 27-30.

### sample vials, containers, and cleaning validation kits

#### Sievers Certified (<10 ppb TOC) Vials

Sievers Certified (<10 ppb¹) TOC Vials are designed for use in critical pharmaceutical applications such as USP and EP Water testing as well as municipal water testing. Our certification to below 10 ppb gives you confidence in the quality of your TOC measurements. In addition, they are:

- Scrupulously cleaned in an ISO 9001 environment using a validated, automated process
- Manufactured by the global leader in TOC measurement technology and TOC standards
- Economical, with added savings on volume orders
- Reliable, with guaranteed performance

# Sievers Certified TOC Vials are compatible with most TOC analyzer brands, including Sievers, Shimadzu, OI Analytical, Teledyne-Tekmar, and Skalar.

<sup>1</sup> The <10 ppb certification applies to empty 40-mL TOC & 30-mL DUCT vials.

part #	description
HMI 77510-01	Sievers Certified Blue Dual Use Conductivity & TOC Vials, 30-mL, 30-case
	Pre-cleaned and certified (<10 ppb TOC), no ionic leaching 30-mL specialty coated glass with caps and specialty septa, 30 per case. These vials are suitable for Stage 1 conductivity measurements and simultaneous TOC compliance testing Paper free packaging, produced in an ISO 7 Cleanroom.
HMI 77530-01	Sievers Certified Blue DUCT Clean Package Vials, 30-mL, 30-case, Triple Bagged
	Pre-cleaned and certified (<10 ppb TOC), no ionic leaching 30-mL specialty coated glass with caps and specialty septa, 30 per case. These vials are suitable for Stage 1 conductivity measurements and simultaneous TOC compliance testing. Paper free packaging that is triple bagged, produced in an ISO 7 Cleanroom. This product is designed for multi-entry use such as cleanrooms.
HMI 90610-01	Sievers Certified Blue TOC Vials, 40-mL, 72-case
	Pre-cleaned and certified (<10 ppb TOC) 40-mL glass vials with caps and Teflon-lined septa, 72-case. Paper free packaging, produced in an ISO 7 Cleanroom.
HMI 90690-01	Sievers Certified Blue Pre-acidified TOC Vials, 40-mL, 72-case
	Certified Blue TOC Vials, 40-mL (HMI 90610-01) pretreated with phosphoric acid (20 $\mu$ L of 85 wt% H $_3$ PO $_4$ ) and certified to <35 ppb TOC, 72 per case. Includes a cleanroom sorbent pad, paper free packaging, and is produced and packaged in an ISO 7 Cleanroom.
HMI 91210-01	Sievers Certified Blue TOC Vials, 40-mL, 12-case
	Pre-cleaned and certified (<10 ppb TOC) 40-mL glass vials with caps and Teflon-lined septa, 12-case. Paper free packaging, produced in an ISO 7 Cleanroom.

#### HMI 91230-01

#### Sievers Certified Blue Clean Package Vials, 40-mL, 12-case, Triple Bagged

Pre-cleaned and certified (<10 ppb TOC) 40-mL glass vials with caps and Teflon-lined septa, 12-case. Paper free packaging that is triple bagged, produced in an ISO 7 Cleanroom. This product is designed for multi-entry use such as cleanrooms.



part #	description					
<b>НМІ 775</b> 00-01	Certified Dual Use Conductivity & TOC Vials, 30-mL, 30-case  Pre-cleaned and certified (<10 ppb TOC), no ionic leaching 30-mL specialty coated glass with caps and specialty septa, 30 per case.  These vials are suitable for Stage 1 conductivity measurements and simultaneous TOC compliance testing.					
HMI 90606	Certified TOC Vials, 40-mL, 72-case  Pre-cleaned and certified (<10 ppb TOC) 40-mL glass vials with caps and Teflon-lined septa, 72 per case. These vials are the right choice for strict regulatory compliance testing.					
HMI 90090-01	<b>Pre-acidified TOC Vials, 40-mL, 72-case</b> Certified TOC Vials, 40-mL (HMI 90606) pretreated with phosphoric acid (20 $\mu$ L of 85 wt% $H_3P0_4$ ) and certified to <35 ppb TOC, 72 per case.					
HMI 90217-01	Pre-cleaned 17-mL Glass Vials with Caps and Septa, 200-case Pre-cleaned 17-mL glass vials with caps and Teflon-lined septa, 200 per case. Certified to <20 ppb TOC. Vial dimensions: 18 mm x 100 mm.					
HMI 90691-01	Filled Pre-acidified TOC Vials, 4-pack Certified TOC vials, 40-mL (HMI 90606) filled with 0.072% phosphoric acid, package of 4. Certified to <85 ppb TOC.					

#### Environmental, Municipal, and Process Sample Vials

part #	description
HMI 90707-01	40-mL Sample Vials, 72-case
	40-mL glass vials with Teflon-lined septa, 72 per case. These are non-certified sample vials suitable for general process monitoring. They are guaranteed to <100 ppb TOC.
HMI 90708-01	40-mL Amber Sample Vials, 72-case
	40-mL glass vials with Teflon-lined septa, 72 per case. These are non-certified sample vials suitable for general process monitoring especially for environmental water samples and samples that can be affected by light. They are guaranteed to <100 ppb TOC.

#### **Additional Sample Containers**

part #	description
HMI 90810-02	<b>Pre-cleaned 60-mL Glass Vials</b> with caps and septa, 72 per case. These Volatile Organic Analysis (VOA) vials are certified to meet EPA requirements. Vial dimensions: 26.5 mm x 144.5 mm. Teflon-lined septa thickness: 0.125" (3.2 mm).
HMI 90800-01	<b>35-mL Polypropylene Test Tubes</b> for general sampling, 250 per case. These uncleaned, disposable containers have a round bottom with an open top. The test tubes are autoclavable. Tube dimensions: 20 mm x 150 mm.

#### **TOC Cleaning Validation Kits**

Sievers TOC Cleaning Validation Kits feature low TOC background sampling swabs. Each kit includes 40-mL Sievers Certified TOC Vials and low TOC Alpha® Sampling Swabs. Alpha Sampling Swabs are manufactured and certified to assure extremely low-background TOC levels.

part #	description				
APK 90600-01	Cleaning Validation Kit contains (72) Sievers Certified TOC Vials (<10 ppb TOC) and (80) Certified Sampling Swabs (<50 ppb TOC).				
HMI 90600-01 Cleaning Validation Swab Kit contains (20) Certified Sampling Swabs (<50 ppb TOC).					
HMI 90620-01	Sievers Certified Blue Cleaning Validation Kit, Large contains (72) Sievers Certified TOC Vials (<10 ppb TOC) and (80) Certified Sampling Swabs (<50 ppb TOC). Paper free packaging, vials produced in an ISO 7 Cleanroom.				
HMI 91220-01	Sievers Certified Blue Cleaning Validation Kit, Small contains (12) Sievers Certified TOC Vials (<10 ppb TOC) and (20) Certified Sampling Swabs (<50 ppb TOC). Paper free packaging, vials produced in an ISO 7 Cleanroom.				
HMI 77520-01	Sievers Certified Blue Cleaning Validation Kit, DUCT contains (30) Certified DUCT Vials (<10 ppb TOC and no ionic leaching) and (40) Certified Sampling Swabs (<50 ppb TOC). Paper free packaging, vials produced in an ISO 7 Cleanroom.				

## consumables, reagents, and replacement parts



The following are the most frequently used consumables, reagents, and replacement parts. For the full list, please see page 27—30.

When ordering kits, please use the applicable part number and quantity.

#### M-Series

part #	description					
M9 MAINT	M-Series Consumable Kit					
	12-month Consumables Kit for the Sievers M-Series. Includes (4) Persulfate Reagents (150mL EA), (2) Acid Reagents, (2) UV Lamps, (2) Sample Pump Heads, and (1) Ion Exchange Resin Bed.					
APF 90310-02	Acid Cartridge					
	300-mL Acid Reagent Cartridge for the Sievers M-Series, 900, and 5310 C Series. Replacement recommended after 6 months.					
APF 90150-02	Oxidizer Cartridge, Low-capacity					
	Low-capacity, 150-mL, Oxidizer Reagent Cartridge for the Sievers M-Series, 900, and 5310 C Series. Replace after 3 months of use.					
APF 90300-02	Oxidizer Cartridge, High-capacity					
	High-capacity, 300-mL, Oxidizer Reagent Cartridge for the Sievers M-Series, 900, and 5310 C Series. Replace after 3 months of use.					
ARK 35010-01	UV Lamp, Replacement					
	UV Lamp for the Sievers M-Series. Lifetime of lamp is 6 months of operation.					
ASM 77250-01	M-Series Resin Bed Replacement					
	Replacement Resin Cartridge for the Sievers M-Series Analyzers.					
APK 77207-01	M-Series Sample Pump Heads					
	Two (2) Replacement Pump Heads for the Sievers M-Series Analyzers.					
APK 43030-02	Degasser, Closed Chamber Degassing Module for Inorganic Carbon Remover (ICR) used with M9, M9°, 900 Series, and 5310 C Laboratory & Portable units.					
APK 43040-02	Degasser, Open Chamber					
	Degassing Module for the Inorganic Carbon Remover (ICR) used with the M5310 C Series and 5310 C On-Line units.					

#### 500 RL and 860 Series

description					
UV Lamp, Replacement					
UV Lamp for the Sievers PPT, 500 Series, 860, and CheckPoint. Average lamp life is 6 months of operation.					
500 RL/860 DI Reservoir/Resin Replacement					
DI Reservoir/Resin Replacement part. This part is a consumable that needs to be replaced every two years. The part is the DI Reservoir with the Resin.					
500 RL/860 Sample Pump Kit					
Two (2) Replacement Sample Pump Heads for 500 RL and 860 Analyzers.					

## consumables, reagents, and replacement parts (continued)

The following are the most frequently used consumables, reagents, and replacement parts. For the full list, please see page 27—30. When ordering kits, please use the applicable part number and quantity.

#### InnovOx Series

part #	description						
APK 68050-01	Reagent, Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 6-pack (Lab Analyzer Only) Kit contains six (600g) pouches of dry sodium persulfate reagent. Each pouch makes 2L of 30% sodium persulfate solution.						
APK 68051-01	Reagent, Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , Single-pack (Lab Analyzer Only) Kit contains one [600g] pouch of dry sodium persulfate reagent. Each pouch makes 2L of 30% sodium persulfate solution.						
APK 68052-01	Reagent, Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 8-pack (On-Line Analyzer Only) Kit contains eight (500g) pouches of dry sodium persulfate reagent. Kit makes 3.5 Gallons of 30% sodium persulfate solution.						
SCH 68100-01	Hydrochloric Acid, 3N, 500-mL  Kit contains 0.5 liters of 3M HCl acid reagent for the InnovOx Analyzer. This container is drop shipped to the customer's location within USA only.						
APK 68110-01	InnovOx Reactor Seal Kit Replacment seals for the high pressure valves. Kit contains (2) seals, one for each valve.						
APK 68100-02	InnovOx Pinch Tubing Kit (Lab) Replacement Pinch Tubing for Lab Analyzers.						
APK 68865-02	InnovOx Pinch Tubing Kit (OL) Replacement Pinch Tubing for On-Line Analyzers.						
HFL 68100-02	InnovOx NDIR Filter, White Replacement NDIR Filter.						
APK 68140-02	InnovOx Gas Tubing Kit (Lab and On-Line) Replacement Gas Tubing.						
APK 68130-02	InnovOx Waste Tubing Kit (Lab and On-Line) Replacement Waste Tubing.						
APK 68615-01	InnovOx Boxer Sample Pump Tubing Replacement Peristaltic Pump Tubing. For use on sample and reactor pumps.						
APK 68205-01	Innov0x Sample/Reactor Pump Head Replacement Peristaltic Pump Head. For use on sample or reactor pumps.						
APK 68555-01	InnovOx Air Filter Cartridges Replacement Air Filter Cartridge for optional air filter system (Lab Analyzer Only).						
APK 68501-01	InnovOx Lab Service Kit - Normal Application (Boxer Pump) Kit contains all the required consumables for a year of operation. This kit is for normal applications and analyzers configured with Boxer Pumps.						
APK 68502-01	InnovOx Lab Service Kit - Harsh Application (Boxer Pump) Kit contains all the required consumables for a year of operation. This kit is for harsh applications and analyzers configured with Boxer Pumps.						
APK 68601-01	InnovOx On-Line Service Kit - Harsh Application (Boxer Pump) Kit contains all the required consumables for a year of operation. This kit is for harsh applications and analyzers configured with Boxer Pumps.						
APK 68504-02	InnovOx Air Filter Option (Year Supply) Kit contains one year's supply of (4) replacement Air Filter Cartridges for optional air filter system (Lab Analyzer Only).						

#### CheckPoint and CheckPoint<sup>e</sup>

part #	description
ARK 35001-01	<b>UV Lamp, Replacement</b> UV Lamp for the CheckPoint. Average lamp life is 6 months of operation.
APK 97010-01	CheckPoint Consumables Kit (2) UV Lamps and (2) Pump heads.

**Sievers Certified Reference Materials** 

**TOC Sample Vials, Containers, Cleaning Validation Kits** 

**Consumables, Reagents, and Replacement Parts** 

## Sievers Certified Reference Materials & Reagents

5107015 00	Timed Reference Flaterials	a neagent			
part #	lescription	model	part #	description	model
STD 97701-01	500 RL Reagent Water	500 RL	STD 90044-01	System Suit + Rs	M9/900
STD 33001-02	HCl Rinse Solution	500 RL	STD 90046-01	TOC KHP Set, 1 mg/L	M9/900
STD 74401	500 RL Single Point Calibration Set A	500 RL	STD 90047-01	Low Level Linearity Set	M9/900
STD 74402	500 RL Acc/Prec/Ver Set	500 RL	STD 90048-01	Extended Linearity Set	M9/900
STD 74403	500 RL System Suitability Set	500 RL	STD 90049-01	Sucrose Set, Rw + 2 Rs	M9/900
STD 74404	500 RL Multi-Point Cal. Set B	500 RL	STD 90050-02	Sucrose Set, 4 Rs	M9/900
STD 74405	500 RL Single Point Cal. Set A (TOC only)	) 500 RL	STD 90051-01	Rw, 1 mg/L + 10 mg/L KHP	M9/900
STD 74406	500 RL Linearity Set	500 RL	STD 90052-01	System Suit + 1 mg/L KHP	M9/900
STD 74407	500 RL Acc/Prec/Ver Set (TOC only)	500 RL	STD 90054-01	System Suit Cleaning Validation	M9/900
STD 74408-01	500 RL Robustness Set	500 RL	STD 90055-01	500 μg/L KHP Ver +H <sub>2</sub> O <sub>2</sub> Rinse	M9/900
STD 74429-01	500 RL SDBS Suitability Set	500 RL	STD 91901-01	KHP Set of 2, 500 μg/L	M9/900
STD 74501	500 RL Super iOS Single Point Cal. Set A	500 RL	STD 91903-01	KHP Set of 2, 5 mg/L	M9/900
STD 74502	500 RL Super iOS Acc/Prec/Ver Set	500 RL	STD 91904-01	KHP Set of 2, 10 mg/L	M9/900
STD 74503	500 RL Super iOS System Suitability	500 RL	STD 91905-01	KHP Set of 2, 25 mg/L	M9/900
STD 74504	500 RL Super iOS Multi-Pt. Cal. Set B	500 RL	STD 99001-01	M9/900 KHP Set, 5 ppm	M9/900
STD 74505	500 RL Super iOS Single Pt. Cal. A (TOC Onl	ly) 500 RL	STD 99003-01	DUCT System Suitability Set	M9/900
STD 74506	500 RL Super iOS Linearity Set	500 RL	STD 99004-01	Low Level Sucrose Set	M9/900
STD 74507	500 RL Super iOS Acc/Prec/Ver (TOC Onl	ly) 500 RL	STD 99005-01	Sucrose Set, 2 ppm	M9/900
STD 74508-01	500 RL Super iOS Robustness Set	500 RL	STD 99006-01	System Suitability + Rss	M9/900
STD 74509-01	500 RL Super iOS Specificity Set	500 RL	STD 99007-01	Innov0x Pharma Calibration Set	M9/900
STD 74527-01	500 RL Super iOS Rinse Vial Set	500 RL	STD 99008-01	100 ppb Sucrose Set	M9/900
STD 74529-01	500 RL Super iOS SDBS Suitability	500 RL	STD 99009-01	DUCT System Suitability + Rs	M9/900
STD 90080-01	Hydrogen Peroxide Rinse	500 RL	STD 99010-01	1 ppm KHP Set	M9/900
STD 77035-01	Conductivity Std	500 RL	STD 99011-01	USP <661> Acc/Prec Set, 5 ppm	M9/900
STD 74409-01	Specificity Set	500 RL	STD 99012-01	USP <661> Linearity Set	M9/900
STD 77000-01	M-Series Multi-Point Calibration Set	M9/M5310 C	STD 99013-01	DUCT Sucrose Set, Rw + 5 Rs	M9/900
STD 77200-01	M-Series Autoreagent Verification Set	M9/M5310 C	STD 99014-01	Sucrose Set, Rw + 3 Rs	M9/900
STD 77001-01	M9 Validation Set with Cal/Ver	M9	STD 99015-01	100 ppb Urea Set	M9/900
STD 77014-01	M9/M9e Turbo Multi-Pt. Calibration Set	M9	STD 99016-01	7 ppm Sucrose Set	M9/900
STD 77015-01	M9/M9e Turbo Verification Set	M9	STD 99017-01	1 ppm KHP Set x2	M9/900
STD 77026-01	M9 Conductivity Calibration	M9	STD 99018-01	5.5 ppm KHP Set	M9/900
STD 77030-01	M9 Conductivity Verification	M9	STD 99020-01	500 ppb KHP Set	M9/900
STD 77011-01	10 μS/cm KCI Conductivity Check Std	M9	STD 99021-01	2 ppm KHP Set	M9/900
STD 30004-01	Standard SolutionRs	M9/900	STD 99023-01	10 ppm KHP Set	M9/900
STD 30008-01	System Suitability SolutionRss	M9/900	STD 99024-01	System Suit + Rw	M9/900
STD 31004-01	System Suitability Set	M9/900	STD 99028-01	Low Level KHP + 1 ppm IC Set	M9/900
STD 31007-01	System Suitability, Set of 2	M9/900	STD 99030-01	2 x Conductivity Ver Set	M9/900
STD 31012-01	Linearity Standard Set	M9/900	STD 99031-01	3-Point KHP Set, 0.25-2 ppm	M9/900
STD 31013-01	Acc/Prec/Ver Set, 500 μg/L	M9/900	STD 99032-01	5-Point KHP Set, 0.25-2 ppm	M9/900
STD 31015-01	1.25 mg/L Sucrose Set	M9/900	STD 30002-01	IC Standard, 25 mg/L	M9/M5310 C/900
STD 33001-02	HCl Rinse Solution	M9/900	STD 77100-01	Reagent Water Blank-Rw	M9/M5310 C/900
STD 74409-01	Specificity Set	M9/900	STD 77106-01	Pack of (4) Reagent Water	M9/M5310 C/900
STD 77004-01	•	M9/900	STD 90001-01	Single Pt. Calibration Set, 1 mg/L	M9/M5310 C/900
STD 77013-01	Acc/Prec/Ver Set, 8 mg/L	M9/900	STD 90002-01	Single Pt. Calibration Set, 5 mg/L	M9/M5310 C/900
STD 90007-01	Single Point Verification Set, 500 μg/L	M9/900	STD 90003-01	Single Pt. Calibration Set, 10 mg/L	M9/M5310 C/900
STD 90037-01	Robustness Set	M9/900	STD 90004-01	Single Pt. Calibration Set, 25 mg/L	M9/M5310 C/900
STD 90039-01	SDBS Suitability Set	M9/900			

## **Sievers Certified Reference Materials & Reagents**

part #	description	model	part#	description	model
STD 90005-01	Single Pt. Calibration Set, 50 mg/L	M9/M5310 C/900	STD 99007-01	Innov0x Pharma Calibration Set	Innov0x
STD 90008-01	Single Pt. Verification Set, 1 mg/L	M9/M5310 C/900	STD 68901-01	Check Standard, 10 ppm KHP, 4 L Carboy	Innov0x
STD 90009-01	Single Pt. Verification Set, 2 mg/L	M9/M5310 C/900	STD 68902-01	Check Standard, 50 ppm KHP, 4 L Carboy	Innov0x
STD 90010-01	Single Pt. Verification Set, 5 mg/L	M9/M5310 C/900	STD 68903-01	Check Standard, 100 ppm KHP, 4 L Carboy	Innov0x
STD 90011-01	Single Pt. Verification Set, 10 mg/L	M9/M5310 C/900	STD 68904-01	Check Standard, 250 ppm KHP, 4 L Carboy	Innov0x
STD 90012-01	Single Pt. Verification Set, 25 mg/L	M9/M5310 C/900	STD 68905-01	Check Standard, 500 ppm KHP, 4 L Carboy	Innov0x
STD 90013-01	Single Pt. Verification Set, 50 mg/L	M9/M5310 C/900	STD 68906-01	Check Standard, 1000 ppm KHP, 4 L Carboy	Innov0x
STD 90080-01	Hydrogen Peroxide Rinse	M9/M5310 C/900	STD 68907-01	Check Standard, 5000 ppm KHP, 4 L Carboy	Innov0x
STD 91200-01	Single TOC Vial, 1 ppm KHP	M9/M5310 C/900			
STD 91300-01	Single TOC Vial, 5 ppm KHP	M9/M5310 C/900			
STD 90031	Municipal TOC Verification Set	M5310 C/5310 C			<u> </u>
STD 96000-01	5310 C Multi-Point Calibration Set	5310 C	TOC Sample \	/ials, Containers, Cleaning Validation Ki	ts
STD 90000-01	900 Multi-Point Calibration	900			<del></del> -
STD 90014-01	900 Turbo Calibration Set, 4 mg/L	900	HMI 77500-01	Dual Use Conductivity & TOC Vials, 30-case	M9, 500 RL
STD 90015-01	900 Turbo Verification Set, 4 mg/L	900	HMI 77510-01	Certified Blue DUCT Vials, 30-case	M9, 500 RL
STD 90034	900 Autoreagent Verification Set	900			
STD 90036	900 Autoreagent Calibration Set	900	HMI 77520-01	Certified Blue DUCT CV Kit, 30 vials, 40 swabs	M9, 500 RL
STD 70005-01	Boron Verification	Boron	HMI 77530-01	Certified Blue DUCT Clean Package, 30-case	M9, 500 RL
STD 31003-04	CheckPoint System Suitability Set	CheckPoint	HMI 90090-01	Pre-acidified vials, 72-case	Multiple
STD 97006-02	CheckPoint TOC Linearity Set	CheckPoint	HMI 90217-01	Pre-cleaned, 17 mL Glass Vials with Caps	Multiple
STD 97010-02	CheckPoint TOC Calibration Set	CheckPoint	HMI 90606	Certified TOC Vials, 40 mL, 72-case	
STD 77035-01	CheckPoint Conductivity Std	CheckPoint			Multiple
STD 68015-01	Innov0x 0-100 ppm Cal & Ver Set	Innov0x	HMI 90610-01	Certified Blue TOC Vials, 72-case	Multiple
STD 68020-02	Innov0x 0-1000 ppm Cal & Ver Set	Innov0x	HMI 90620-01	Certified Blue Large CV Kit, 72 vials, 80 swabs	Multiple
STD 68050-02	Innov0x T0C Service Kit	Innov0x	LIMI 00/00 01		Modelata
STD 68100-01	InnovOx Reagent Water	Innov0x	HMI 90690-01	Certified Blue Pre-acidified TOC Vials	Multiple
STD 68202-01	InnovOx TOC Cal, 2 ppm	Innov0x	HMI 90707-01	40 mL Sample Vials, 72-case	Multiple
STD 68205-01	InnovOx TOC Cal, 5 ppm	Innov0x	HMI 90810-02	Pre-cleaned, 60 mL Glass Vials	Multiple
STD 68210-01	InnovOx TOC Cal, 10 ppm	Innov0x	HMI 91210-01	Certified Blue TOC Vials, 12-case	Multiple
STD 68211-01	Innov0x TOC Ver, 10 ppm	Innov0x	HMI 91220-01	Certified Blue Small CV Kit, 12 vials,	Multiple
STD 68225-01	InnovOx TOC Cal, 25 ppm	Innov0x		20 swabs	
STD 68226-01	InnovOx TOC Ver, 25 ppm	Innov0x	HMI 91230-01	Certified Blue Clean Package, 12-case	Multiple
STD 68250-01	Innov0x TOC Cal, 50 ppm	Innov0x	APK 90600-01	Cleaning Validation Kit, 72 vials, 80 Swabs	Multiple
STD 68251-01	InnovOx TOC Ver, 50 ppm	Innov0x	HMI 90600-01	Cleaning Validation Swab Kit, 20 Swabs	Multiple
STD 68310-01	InnovOx TOC Cal, 100 ppm	Innov0x	HMI 90800-01	Polypropylene Test Tubes, 35 mL	500 RL
STD 68311-01	InnovOx TOC Ver, 100 ppm	Innov0x	HMI 90608-01	Certified TOC Vials, Amber, 40 mL, 72-case	Multiple
STD 68320-01	InnovOx TOC Cal, 200 ppm	Innov0x	HMI 90708-01	40 mL Amber Sample Vials, 72-case	Multiple
STD 68350-01	InnovOx TOC Cal, 500 ppm	Innov0x	HMI 90691-01	Filled Pre-acidified Vial, 40 mL Solution,	Multiple
STD 68351-01	InnovOx TOC Ver, 500ppm	Innov0x		4-pack, 0.072%	'
STD 68410-01	InnovOx TOC Cal, 1000 ppm	Innov0x	HMI 90692-01	Filled Pre-acidified Vial, 20 mL Solution,	Multiple
STD 68411-01	Innov0x TOC Ver, 1000 ppm	Innov0x	111411 /00/2-01	0.072%	Humpte
STD 68450-01	Innov0x TOC Cal, 5000 ppm	Innov0x	LIMI 00/00 04		Made: 1
STD 68451-01	InnovOx TOC Ver, 5000 ppm	Innov0x	HMI 90693-01	Filled Pre-acidified Vial, 40 mL Solution,	Multiple
STD 68520-01	Innov0x TOC Cal, 20000 ppm	Innov0x		4-pack, 0.085%	
STD 68521-01	Innov0x TOC Ver, 20000 ppm	Innov0x			
STD 68551-01	Innov0x TOC Cal/Ver, 50000 ppm	Innov0x			
STD 68620-02	Innov0x 100 ppm IC Standard	Innov0x			
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## Consumables, Reagents, and Replacement Parts

			part #	description	model
ARK 35010-01	UV Lamp Replacement	M-Series/900	APK 68865-02	InnovOx Pinch Tubing Kit (OL)	Innov0x
		500/CheckPoint	HFL 68100-02	InnovOx NDIR Filter, White	Innov0x
APK 77207-01	M-Series Sample Pump Heads	M-Series	APK 68140-02	Innov0x Gas Tubing Kit	Innov0x
ACT 77080-01	ICR Chemical Trap, M-Series	M-Series		(Lab and On-Line)	
APK 77250-01	Resin Bed, M-Series	M-Series	APK 68130-02	InnovOx Waste Tubing Kit	Innov0x
M9 MAINT	12-month M-Series Consumables Kit	M-Series	151/ /0404 04	(Lab and On-Line)	
APF 90150-02	Oxidizer Cartridge, 150 mL	M-Series/900	APK 68131-01	InnovOx Chemical Resistant Waste Tubing Kit (Lab and On-Line)	Innov0x
APF 90300-02	Oxidizer Cartridge, 300 mL	M-Series/900	APK 68615-01	InnovOx Boxer Sample Pump Tubing	Innov0x
APF 90310-02	Acid Cartridge	M-Series/900	APK 68205-01	InnovOx Sample/Reactor Pump Head	InnovOx
APF 90311-01	Acid Cartridge, Semi Only	M-Series/900	APK 68555-01	InnovOx Air Filter Cartridges	InnovOx
APK 96510-03	AS Needle Assembly Kit	M-Series/900	ASM 68500-01	InnovOx Autosampler Needle Kit	InnovOx
ARK 34110	Pump Diaphram Maintenance Kit	M-Series/900	APK 68996-01	InnovOx Filter Panel 100-Mesh	InnovOx
HTF 34000	Disc Filter	M-Series/900	AT N 00770-01	Replacement Screen	IIIIIOVOX
HTF 94401	In-Line SS Filter 60 micron	M-Series/900	APK 68997-01	Innov0x Filter Panel 20-Mesh	Innov0x
HTF 94402	Replacement Filter 60 micron	M-Series/900		Replacement Screen	
APK 43030-02	Degasser, Closed Chamber	M9/900 ICR	ARK 34110	InnovOx Pump Diaphragm Kit	Innov0x
APK 43040-02	Degasser, Open Chamber	M9/900 ICR	HTF 34000	Innov0x Disk Filter	Innov0x
HFL 00081	Capsule Filter, High Capacity, 40 micron	M5310 C/5310 C	APK 68306-01	Syringe Lube Kit	Innov0x
HFL 61000-01	Cartridge Filter, 50 micron	M5310 C/5310 C	SMI 68010-01	Krytox Grease	Innov0x
HFL 61010-01	Bag Filter, PPE, 50 micron	M5310 C/5310 C	APK 68501-01	Innov0x Lab Service Kit -	Innov0x
APK 74017-01	500 RL Sample Pump Kit	500 RL		Normal Appication (Boxer Pump)	
APK 74160	500 RL DI Reservoir/Resin Replacement	500/900	APK 68502-01	InnovOx Lab Service Kit -	Innov0x
900 MAINT	12-Month 900 Series Consumables Kit	900	151/ /0/04 04	Harsh Appication (Boxer Pump)	
ACT 00070-02	ICR Chemical Trap, 900	900	APK 68601-01	Innov0x Online Service Kit - Harsh Appication (Boxer Pump)	Innov0x
APK 96004-01	Resin Bed, 900	900	APK 68504-02	InnovOx Air Filter Option (Year Supply)	Innov0x
ATU 96200	Sample Pump Tubing, 900	900	RGT 68003-01 <sup>2</sup>	Hydrochloric Acid, 3N (Bulk Reagent)	InnovOx
HMI 89070	Epson Thermal Printer Paper	Multiple	RGT 68006-01 <sup>2</sup>	Phosphoric Acid, 6M (Bulk Reagent)	InnovOx
APK 97000-01	Pump Head Assembly Kit	CheckPoint	RGT 68025-01 <sup>2</sup>	Sodium Persulfate, 30% W/V	InnovOx
APK 97010-01	Consumables Kit	CheckPoint	101 00023 01	(Bulk Reagent)	IIIIIOVOX
APK 97310-01	Filter Element Kit	CheckPoint	ASM 71220-01	Boron Reagent Refill	Boron
EMI 20240-01	Spare Battery	CheckPoint	ASM 71235-01	Boron Pump Tubing	Boron
APK 68050-01	Reagent, Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 6-pack	Innov0x	ASM 71255-01	Boron Set of Columns	Boron
	(Lab Analyzer Only)		ASM 71260-01	Boron Zero Column	Boron
APK 68051-01	Reagent, Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , Single-pack	Innov0x	ASM 71265-01	Boron Reagent Column	Boron
APK 68052-01	(Lab Analyzer Only)	Innov0x	HMI 71125-01	80-mm Filter Media, 5-pack	Boron
AI N 00032-01	Reagent, Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> , 8-pack (On-Line Analyzer Only)	IIIIOVOX	HTF 71140-01	Boron Inline 15 micron Filter	Boron
SCH 68110-01	3M Hydrochloric Acid - 2.5L	Innov0x	HTF 71141-01	Boron 15 micron SS Inline Filter Media	Boron
SCH 68100-01	3M Hydrochloric Acid - 500 mL	Innov0x	1111 71141 01	Boron to fineron 33 mane rater media	Boron
APK 68110-01	InnovOx Reactor Seal Kit	Innov0x			
APK 68100-02	InnovOx Pinch Tubing Kit (Lab)	Innov0x	<sup>2</sup> Rulk Respents	are only available in NAM	
		**	Datk iteageiits	are only available III IVAIVI	

### how to order

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