



PAT700

Total Organic Carbon and Conductivity Analyzer

Supports Compliance with Global Pharmacopeia
Requirements: USP, Ph. Eur.

ACCELERATING
answers

 **BECKMAN
COULTER**
Life Sciences

PAT700 Total Organic Carbon & Conductivity Analyzer



Low Cost of Ownership

Minimal Consumables

- No peristaltic pump means no need to change peristaltic pump tubing or pump heads.

No Reagent Needed

- Oxidation of organic matter is ensured by a powerful UV lamp.

Simplified Maintenance

- 12-month service interval maximizes uptime.



Features

Single Analyzer for TOC, Conductivity and Temperature Measurement

- Can measure TOC, temperature-compensated and non-temperature-compensated conductivity, resistivity and temperature.

Single Conductivity Meter to Measure TIC and TC

- TOC is calculated as the difference between TC and TIC.
- Exhibits good specificity as TOC measurements are not affected by ppm levels of TIC

UV Lamp Efficiency Monitoring System

- Equipped with a dual UV lamp system with UV detect feature that monitors the efficiency of the UV lamp. If the main lamp has low UV intensity, the system automatically switches to standby lamp.

Rouge Detection

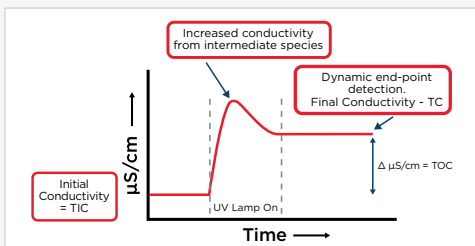
- Automatically alerts you to perform preventive maintenance if the oxidation cell is contaminated from rouging.

Dedicated Clean-In-Place Mode

- Facilitates the integration and the use of the instrument for CIP processes.

Onboard Automated Standards Introduction System (OASIS)

- Facilitates calibration, validation, system suitability tests, grab samples analysis and sample excursion capture. The RFID* technology removes the need for manual data entry and automatically transfers lot number, expiration date and certified value.



TOC is calculated as the difference between TC and TIC



* RFID is not available in all territories



Compliance

USP <643>, USP <645>, and Ph. Eur. 2.2.44 Compliant

- Can be fully validated for TOC, conductivity and temperature to USP and Ph. Eur. requirements.

Compliant with Ph. Eur. 2.2.44 Requirements for Purified Water and Water For Injection Applications

- With a cell that traps an aliquot of water and a dynamic endpoint detection system, it ensures complete oxidation of the organic molecules and discriminates between organic and inorganic carbon.

Supports Root Cause Analysis as Specified in Chapter 6.14 of EU GMP Annex 1

- Excursion mode** captures a sample when a TOC, conductivity or specific alarm occurs. The sample can be used for investigation, root cause analysis and impact assessment on the quality of products and manufacturing processes.

Supports 21 CFR Part 11 Compliance

- Includes multi-user access levels from Active Directory groups, audit trail and secured file export via FTP over Ethernet.*** It also features built-in electronic SOPs for calibration and system suitability with automated calculations and pass/fail decisions.

Load Bottles

1. Open the bottle door
2. Insert the bottles in the order displayed below
3. Close the bottle door
4. Press Next to continue

Bottle 1	Bottle 2	Bottle 3	Bottle 4
Blank		500 ppb Sucrose	500 ppb Benzoquinone

Navigation icons: Lock, Previous, Next, Cancel

Load Bottles

1. Open the bottle door
2. Insert the bottles in the order displayed below
3. Close the bottle door
4. Press Next to continue

Bottle 1	Bottle 2	Bottle 3	Bottle 4
		Excursion	Excursion

Navigation icons: Lock, Previous, Next, Cancel

Ordering Information

Part Number	Description
D25545	PAT700 TOC Analyzer, Single Stream, RFID, with Quick-Connect connections, US/Japan Power Cord
D25546	PAT700 TOC Analyzer, Single Stream, RFID, with Quick-Connect connections, UK/India Power Cord
D25547	PAT700 TOC Analyzer, Single Stream, RFID, with Quick-Connect connections, EU Power Cord
D25548	PAT700 TOC Analyzer, Single Stream, RFID, with Quick-Connect connections, Swiss Power Cord
D06884	PAT700 TOC Analyzer, Single Stream, with Quick-Connect connections, US/Japan Power Cord
D06885	PAT700 TOC Analyzer, Single Stream, with Quick-Connect connections, UK/India Power Cord
D06886	PAT700 TOC Analyzer, Single Stream, with Quick-Connect connections, EU Power Cord
D06887	PAT700 TOC Analyzer, Single Stream, with Quick-Connect connections, Swiss Power Cord
D25549	PAT700 TOC Analyzer, Single Stream, RFID, with conduit wiring connections, No Power Cord

** Excursion mode requires RFID technology

*** Active directory and secured file export via FTP require RFID technology

Specifications

TOC

Operating Range	0.5 to 2,000 ppb as Carbon
Display Resolution	0.1 ppb
Accuracy	+/-3 ppb or ±5%, whichever is greater
Repeatability	±0.3 ppb or ±1%, whichever is greater
Limit of Detection	0.5 ppb
Conductivity Range for TOC Mode	0.05 - 5.0 µS/cm

Conductivity

Conductivity Range	0.05 to 150 µS/cm (@ 25°C)
Conductivity Accuracy	±2% over full range (uncompensated)
Available Conductivity Reporting Modes	Temperature compensated to 25°C, or uncompensated
Available Resistivity Reporting Mode	Temperature compensated to 25°C only
Resistivity	Resistivity Range 0.2 to 18 MΩ-cm (@ 25°C)

Temperature

Ambient Operating Range	10 to 40°C (50 to 104°F)
Measurement Accuracy	±0.5°C
Sample Water Range	1 to 95°C (34 to 203°F)

Physical Specs

UV Lamps	2, with UV Detect technology
Interface/Display	Color touchscreen
Maximum Altitude	4,000 m (13,125 ft)
User I/O Wiring	Three, ¾-inch conduit openings or quick disconnect fittings
Standards System	Onboard Automated Standards Introduction System (OASIS)
Dimensions (W x D x H)	59.7 X 22.9 X 25.4 cm (23.5 X 9 X 10 in.)
Weight	13.6 kg (30 lb)
Sample Inlet Flow Rate Range	60 mL/min to 300 mL/min
Sample Inlet Pressure Range	69 to 690 kPa (10 to 100 psi)

Communications

Analog output	3 x 4-20mA outputs, user configurable TOC, conductivity (uncompensated) and Sample Temperature
Digital output	4 x digital outputs, user configurable (for alarms, etc.)
Digital input	2 x digital inputs (for remote control)

Compliance

Installation Category	II
Pollution Degree	2
Certifications	CE Certified, certified to US and Canadian standards by CSA
Enclosure Rating	Conduit version: IP56, Quick connect version: IP46
Release tests	USP <643>, USP <645>, Ph. Eur. 2.2.44



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