



ANATEL PAT 700

TOTAL ORGANIC CARBON AND CONDUCTIVITY ANALYZER

Fully Compliant with Global Pharmacopeia Requirements : **USP, EP, JP**



CHARACTERIZED
by ingenuity.

 **BECKMAN
COULTER**
Life Sciences

PAT 700 TOTAL ORGANIC CARBON & CONDUCTIVITY ANALYZER

LOW COST OF OWNERSHIP

TOC, conductivity and water temperature from just one analyzer

- Can be fully validated for TOC, Conductivity and Temperature to USP, EP and JP requirements

12 month service interval

- Auto-switching main and standby UV lamps
- UV Detect to ensure UV lamp is working correctly

No chemicals

- Designed specifically for pharmaceutical PW and WFI measurement, this analyser uses just powerful UV light to oxidize the organics

No peristaltic pump

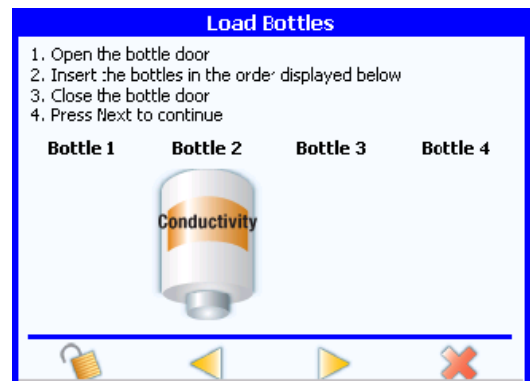
- No tubing and pump heads to replace
- PAT700 traps an aliquot for each analysis, so the measurement is stable and not affected by changes in sample pressure or flow rate

Single sensor to measure TIC and TC

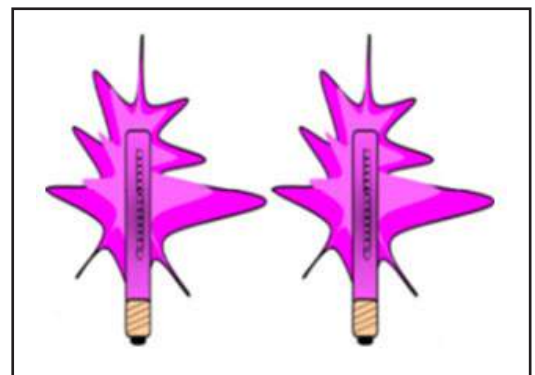
- $TC - TIC = TOC$
- Stable measurements for >12months

On-line and grab-sample analysis in one analyzer

- Built-in, 4 bottle grab sample analyzer



Fully compliant conductivity meter



UV Monitoring with auto-switching Main & Standby UV



IMPROVED COMPLIANCE

Fully ICH Q2 compliant

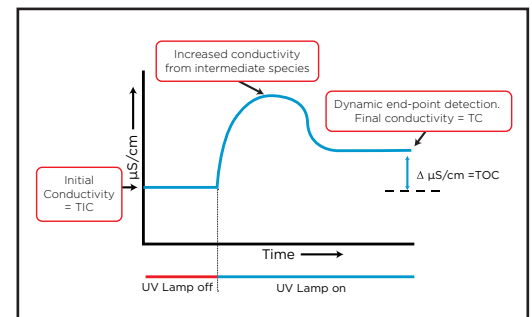
- Not affected by interference from ppm levels of TIC

Complete oxidation

- Fully compliant with EP 2.2.44 requirement for complete TOC oxidation through dynamic end-point detection technology

Root cause analysis support

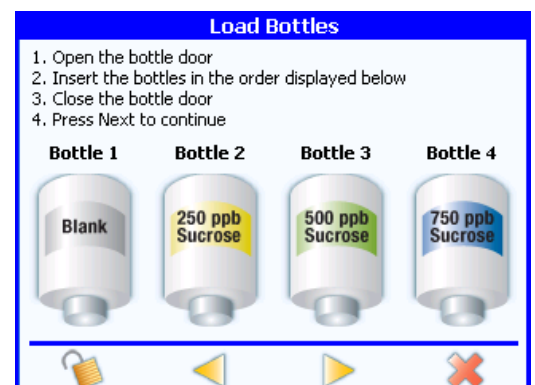
- Excursion capture feature allows a water sample to be captured to assist root cause analysis should a TOC excursion be detected
- Built-in grab-sample analyser for analysing samples from other points in the water loop



Complete TOC oxidation to EP2.2.44

21CFR part 11

- Multi-level user access
- Windows credentials (Microsoft Active Directory)
- Secure .pdf file export via FTP over Ethernet
- No manual data entry – calibration standards use RFID tags to transfer lot number, expiry date and certified value directly to the PAT700
- Built-in electronic automated Calibration and System Suitability SOPs
- No manual calculations – automated Calibration and System Suitability Pass/Fail calculations



Built-in, automated SOPs

Specifications

TOC	Operating Range	0.5 to 2,000 ppb as Carbon
	Display Resolution	0.1 ppb
	Accuracy	±1 ppb or ±5%, whichever is greater
	Repeatability	±0.3 ppb or ±1%, whichever is greater
	Limit of Detection	0.5 ppb
	Maximum Input Conductivity	0.2 µS/cm for all waters, 1.0 µS/cm for all neutral waters, 5.0 µS/cm for water with CO ₂ as the sole conductive species
Conductivity	Conductivity	Range 0.05 to 150 µS/cm (@ 25°C)
	Display Resolution	0.01 µS/cm
	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)
	Display Resolution	0.01 over full range
Temperature	Ambient Operating Range	10 to 40°C (50 to 104°F)
	Measurement Accuracy	±0.4°C
	Sample Water Range	1 to 95°C (34 to 203°F)
	Display Resolution	0.1 over full range
Physical Specs	UV Lamps	2, with UV Detect technology
	Interface/Display	Color touch screen
	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	59.7 w X 22.9 d X 25.4 h cm (23.5 X 9 X 10 inches)
	Weight	13.6 kg (30 lbs)
	Sample Inlet Flow Rate Range	60 mL/min to 300 mL/min
	Sample Inlet Pressure Range	10 to 100 psi (69 to 690 kPa)
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, IEC 61010-1
	CE Compliance	EN 61010-1 and EN 61326
	Safety Rating	ETL, conforming to UL 61010-1 and CSA 22.2 No. 61010-1
	Enclosure Rating	Conduit version: IP56 Quick connect version: IP46
	Release tests,	USP <643>, USP <645>, JP 16, EP 2.2.44
New Features	CIP	Selectable mode for Clean-In-Place analysis
	Dual Stream option	Toggle or programmable stream switching
	Excursion sampling	Minimum flow rate to fill excursion bottle = 160 mL/min
	Rouge detection	Identifies oxidation cell contamination from rouging