

HORIBA



Online / Offline TOC Analyzer for the Low Measuring Range

TOCADERO EVO

HORIBATOCADERO

The Tocadero EVO TOC meter is your precise solution for monitoring organic contamination in ultrapure and pure water—ideal for the pharmaceutical industry, microelectronics, power plants, and chemical production. With innovative UV oxidation and differential conductivity measurement, the device detects even the slightest organic impurities—in real time.



What makes this TOC meter unique – your advantages at a glance

Results in seconds: Continuous online measurement for immediate TOC values.

Reagent-free: No chemicals required – safe,

21 CFR Part 11 ready: Ideal for regulated

Dual mode: Online monitoring plus offline

Long-lasting UV technology: Maximum

Compact & low maintenance: Saves space, time, and resources during operation.

Application cases and further reading on TOC analysis with Tocadero EVO

Industry	Application example
Pharmaceuticals, medical technology & biotechnology	TOC monitoring in WFI production systems, TOC control in cleaning validation, TOC measurement in cooling water circuits, and TOC monitoring in pharmaceutical wastewater.
Semiconductor & Electronics manufacturing	TOC monitoring in ultrapure water systems, TOC control in process chemicals, TOC measurement in CMP slurries, and TOC monitoring in semiconductor wastewater.
Seawater desalination	TOC measurement in seawater inflow, TOC control in membrane cleaning solutions, and TOC monitoring in concentrate effluent.
Hydrogen production	TOC control in electrolysis water, TOC monitoring in cooling circuits, TOC measurement in electrolyte solutions, and TOC monitoring in process wastewater.
Energy generation/ Power plants	TOC monitoring in boiler feed water, TOC control in cooling water systems, TOC measurement in condensates, and TOC monitoring in power plant wastewater.
Drinking water treatment	TOC measurement in raw water, TOC monitoring after treatment stages, TOC control in pure water, and TOC monitoring in municipal wastewater.
Cosmetics & Personal Care Industry	TOC control in production water, TOC monitoring in cooling systems, TOC measurement in process solutions, and TOC monitoring in cosmetic wastewater.
Chemical industry	TOC monitoring in reactor cooling water, TOC control in process water, TOC measurement in catalyst suspensions, and TOC monitoring in chemical wastewater.

METHODS & DETECTION

Continuous flow with UV oxidation and conductivity detection

CYCLE TIME

1 sec. (online method)
1 min. + 1 min. rinsing (offline method)

SAMPLE FLOW

approx. 14 ml/min

MEASUREMENT RANGE

0 - 1500 ppb TOC

ACCURACY & PRECISION

Limit of detection: 0.1 ppb
Accuracy: ± 0.05 ppb online

CONNECTIONS

1 x sample, 1 x check
1 x sample, 3 x check (optional)

NORMALIZATIONS

USP <643>, EP 2.2.44, JP, CP
FDA 21 CFR Part 11 - Compliance for Pharma

ENVIRONMENTAL CONDITIONS

Relative humidity: < 80 % non condensing
Temperature: 10 - 40 °C

DIMENSIONS | WEIGHT | POWER

338 W x 200 D x 450 H mm, 11 kg,
110 - 230 VAC ± 10 %, 47 - 63 Hz, 60 Watt

SAMPLE TYPE

Pure Water (PW) & Ultra Pure Water (UPW), Water for Injection (WFI), Boiler Feed Water

CONDUCTIVITY SAMPLE

< 10 µS/cm

INPUT PRESSURE

< 0.5 bar

SAMPLE TEMPERATURE

< 50 °C

INTERFACES

Optional: 2 additional analog outputs,
2 additional relay outputs,
autosampler

2 x analog (0/4 - 20 mA), according NAMUR NE43
1 x relais (collective error)
RJ45 Ethernet, USB



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Quality

Monitoring organic pollution by measuring the Total Organic Carbon (TOC) levels in pure and highly purified water is a fundamental requirement for ensuring quality in microelectronic and pharmaceutical production. Additionally, the power plant sector and the chemicals industry are increasingly in need of online monitoring for this parameter. Swift response by monitoring systems is crucial for early problem detection in these sensitive areas. TOC sensors utilizing UV oxidation and conductivity detection are ideally suited for this purpose. Responsive TOC analyzers play a key role in monitoring water used for cleaning and rinsing production plants (Clean-In-Place, CIP).

The advantages at a glance

- ✓ Simple and fast measuring method with the best cost-performance ratio
- ✓ Response time in the range of seconds with continuous online measurement
- ✓ Reagent-free analysis guarantees minimal operating costs
- ✓ Low sample consumption
- ✓ Nine-month lifetime guarantee for UV lamps
- ✓ Manual single measurements of samples in offline mode (grab sample)



PW, UPW and WFI

In the pharmaceutical sector, various water qualities are defined according to different pharmacopoeias (e.g., European Pharmacopoeia, USP). Common qualities include Purified Water (PW), Highly Purified Water (HPW), and Water for Injection (WFI).




Differential conductivity analyzers have become established in the market as the preferred method for continuously monitoring this water in accordance with pharmaceutical standards. Besides technical structure, factors such as availability, reliability, and ease of maintenance are particularly important.



HORIBA Tocadero

The manufacturing and quality control processes at HORIBA Tocadero ensure the highest level of reliability for analytical technology. The software provides user support through clear, structured dialog boxes and offers a wide range of functions for quality assurance and self-diagnosis. The system is calibrated automatically and includes a plausibility check. The analyzer is portable, allowing for mobile use, and its minimal fluid and electrical connections enable swift assembly and high flexibility.

HORIBA Tocadero's comprehensive after-sales service guarantees application support with high availability. Optional components are available to customize the analyzer for specific measurement tasks.


-  Compact design
-  Advanced quality management (AQM) based on the diagnostic data and plausibility check
-  Ensuring precise measured values through automatic zero-point adjustment



HORIBA Tocadero offers reliable, sophisticated technology and expert support as required. "Made in Germany"

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