

BioTector – The right analyzer for every application in the process

Determine TOC based on two-stage advanced oxidation technology, which can also handle demanding process conditions.

- Representative sample of 10 - 12 mL
- Integrated, automatic cleaning
- Particles up to 2 mm can be sampled without pre-filtration
- Also suitable for: High salt loads, oils, fats, calcium and lubricants
- Certified uptime of 99.86% (according to M-Cert.)

For every application



B7000i

- Industrial wastewater treatment plant influent and effluent
- Process water
- Product loss control
- Oil in water



B3500e

- Industrial wastewater treatment plant effluent
- Discharge control
- Rainwater/river water
- Ground/surface water



B3500c

- Condensate return
- Cooling water
- Boiler feed water
- Demineralized water
- Reverse osmosis water
- Carbon bed absorber



B3500ul

- Energy supply
- Ultra-pure water

TNTplus vial tests for manual laboratory analysis

Hach offers two vial tests for TOC analysis:

Ready-to-use with pre-dosed reagents for photometric analysis.

TNTplus vial tests allow you to reliably determine the precise TOC level.

Simple QC measurements can be implemented in the form of stable, ready-to-use standards.



Find out more about application notes from the chemical industry, paper industry, municipal wastewater treatment plants and dairy plants by requesting the documents from your Hach representative.



Be Right™



Be Right™

TOC measurement in laboratories and processes

The right solution for every
requirement



DOC160.53.10223.Mar24



Your benefits

Reliably comply with the relevant legal requirements

- Suitable for use in processes or in the laboratory, with a certified uptime of 99.86%

Solutions from a single source for the differing requirements of laboratories and processes

- Manual laboratory analysis
- Automated laboratory analysis
- 24/7 uptime via online analytics

Ability to select the right measurement method for your needs

QP1680 TOC



► Small and compact

Sampler, TOC and TN module completely integrated

► No carry-over

Direct sample entry

► Reliable performance, even with a difficult sample matrix

► Extremely easy to maintain

Plug-and-play concept

QP1680 TOC – Automated laboratory analysis

Determine TOC and TN_b using the high-temperature digestion method, which is adapted to the requirements of laboratory analysis.

Technical data*

Model	QP1680-TOC	QP1680-TOC/TN _b	QP1680-TN _b
Parameter	TOC	TOC, TN _b	TN _b
Oxidation method	Catalytic combustion at 680 °C	Catalytic combustion at 720 °C	Catalytic combustion at 720 °C
Measurement method	NDIR (non-dispersive infrared detection)	TOC: NDIR (non-dispersive infrared detection) TN: Chemiluminescence	Chemiluminescence
Duration of analysis	Approx. 3 minutes	Approx. 4 minutes	Approx. 3 minutes**
Gas consumption	200 mL/min***	250 mL/min***	200 mL/min
Gas specifications	Oxygen or synthetic air: at least 99.998 % (4.8) at 3 - 10 bar		
Temperature	Maximum incinerator temperature of 1050 °C		
Measuring range	TC, TIC, NPOC, TN _b : 0 - 30,000 mg/L		
Limit of detection	TC, TIC, NPOC: 50 µg/L TN _b : 20 µg/L		
Repeatability	Up to 10 mg/L TC, TIC, NPOC, TN: < 5 % > 10 mg/L TC, TIC, NPOC, TN: < 2 %		
Sample volume	10 - 1000 µL		
Standards	TOC/NPOC: ASTM D7573, EN 1484, EPA 415.1, EPA 9060A, ISO 8245, SM 5310B, NEN-ISO 20236 TN _b : ASTM D8083, EN 12260, ISO 11905-2, NEN-ISO 20236		
Dimensions	440 mm x 380 mm x 700 mm (H x W x D)		

*Subject to change without notice

**Analysis time with purging for the NPOC method is around 15 minutes

***An additional 300 mL/min is consumed during sample preparation for NPOC determination



Plug and play; combustion tube changeable in just five minutes.

QP1680 TOC – It's easy too!

- TOC determination in accordance with EPA 415.1, EPA 9060A and SM 5310B
- Integrated sample changer with stirring function
- Optional TN module integrated in the TOC housing
- Plug-and-play concept with intuitive software

Sampling

- Sample volumes of 10 - 1000 µl; suitable for very small sample volumes
- No contamination by direct injection of the sample (no valves or septum)
- Needle diameter is 0.8 mm; cellulose test based on the relevant standard
- Automatic dilution for a more flexible measuring range setup

Software

- Multi-user level access with four configurable levels
- Samples within one batch can be measured with different sample volumes
- Samples can be re-calculated as required

Combustion tube and catalyst

- Quick-change units for the furnace and IC reactor
- Optimized catalyst filling; only 5 g of catalyst per filling (pre-configured)

Sample matrix

- Salt matrix up to 30 g/L
- Flexibility in terms of sample volume and corresponding calibration curves facilitates handling of samples from different sources

Servicing and spare parts

- A color-coded panel (traffic light system) monitors all key components in real time
- Components that are important for the user are easy to access and replace
- QP1680 is offered with a maintenance agreement