

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
- about our own real time control (RTC) solutions by requesting the documents from your Hach representative.



Be Right™



Be Right™

TOC measurement in laboratories and processes

The right solution for every
requirement



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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