BioTector – The right analyser for every application in the process

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

- Representative sample of 10 - 12 mL
- Integrated, automatic cleaning
- Soft particles up to 2 mm can be detected 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
- Demineralised water
- Reverse osmosis water
- Carbon bed absorber

B3500ul
- Energy supply
- Ultra-pure water

LCK cuvette tests for manual laboratory analysis

Hach® offers five cuvette tests for TOC analysis:
Ready-to-use with pre-dosed reagents for photometric analysis.

Whether you use the expulsion method or the difference method, LCK cuvette tests allow you to reliably determine the precise TOC level.

Simple AQA measures can be implemented in the form of stable, ready-to-use standards and free, round robin test participation.

Find out more
- about **application notes** from the chemical industry, paper industry, municipal wastewater treatment plants and dairy plants
- about our AnaShell analyser shelters
- about our own real time control (RTC) solutions

by requesting the documents from your Hach representative.

DOC160.52.10223.Oct21

HACH®
Be Right™

HACH®
Be Right™

TOC measurement in laboratories and processes

The right solution for every requirement

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

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

QP1680 TOC – It's easy too!

- TOC determination in accordance with ISO 20236, EN 1484 and ISO 8245
- 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 incinerator and IC reactor
- Optimised 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 colour-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