

# MACHEREY-NAGEL

## NANOCOLOR<sup>®</sup> TOC

Water Analysis



Fast and reliable TOC determination

- TOC determination in only three steps
- Efficient sample preparation within 5 minutes
- Decomposition in just 1 hour
- Highly sensitive measuring range starting at 2 mg/L TOC
- Excellent results in comparative measurements

**MACHEREY-NAGEL**

[www.mn-net.com](http://www.mn-net.com)



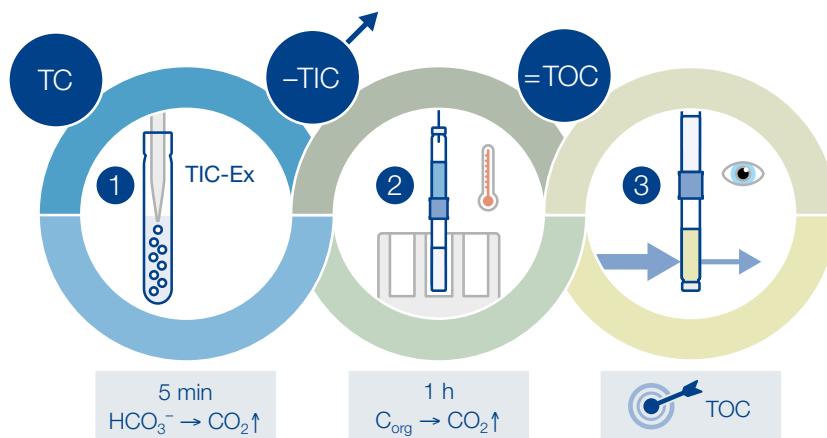
## TOC determination in only three steps

### TOC-analysis using NANOCOLOR®

Besides COD (chemical oxygen demand) and BOD<sub>5</sub> (biochemical oxygen demand), TOC (total organic carbon) is an important sum parameter for the evaluation of the organic load in waste water. It is calculated as the sum of dissolved and undissolved organic carbon compounds. The TC (total carbon) of a sample consists of the TIC (total inorganic carbon) and the TOC.

The TOC-content of waste water can reliably be determined with the new tube tests NANOCOLOR® TOC 30 and NANOCOLOR® TOC 300. Only three steps are necessary to safely obtain correct results within just two hours.

- 1 Removal of inorganic carbon with NANOCOLOR® TIC-Ex
- 2 Sample decomposition with NANOCOLOR® Heating blocks
- 3 Measuring of cuvettes with NANOCOLOR® Photometers



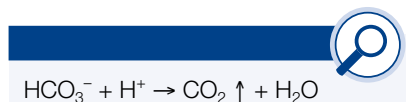
TOC = TC - TIC

### 1 Efficient sample preparation within 5 minutes

#### Removal of inorganic carbon with NANOCOLOR® TIC-Ex

The NANOCOLOR® TIC-Ex is a new device, which was designed especially for the efficient removal of TIC, even from very hard waters. The device is capable of removing the TIC from up to 8 samples simultaneously in just 5 minutes. Therefore, using the NANOCOLOR® TIC-Ex makes your sample preparation even more efficient than other comparable methods concerning TIC removal.

- Sample preparation within 5 minutes
- Treatment of 8 samples simultaneously



NANOCOLOR® TIC-EX  
Removal of inorganic carbon (TIC = total inorganic carbon) with acid

## 2 Decomposition in just 1 hour

Sample decomposition with *NANOCOLOR®* Heating blocks

Decomposition of the pretreated sample is carried out in just 1 hour at 100 °C using a heating block. This is enabled by the use of an open system, resulting in a saving of time for the user, compared to other methods. All reagents required are provided in the respective cuvettes, guaranteeing a safe handling of the test.

- Decomposition in just 1 hour
- Saving of time compared to other methods due to an open system
- Secure handling using predosed reagents

## 3 Highly sensitive measuring range starting at 2 mg/L TOC

Measuring of cuvettes using *NANOCOLOR®* Photometers

The *NANOCOLOR®* TOC 30 tube test is highly sensitive with a measuring range from 2–30 mg/L C, while the *NANOCOLOR®* TOC 300 tube test covers a broad range from 20–300 mg/L C. These measuring ranges allow a reliable TOC-analysis, even for small concentrations.

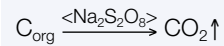
- Perfect measuring range for effluent and influent  
Effluent: *NANOCOLOR®* TOC 30: 2–30 mg/L TOC  
Influent: *NANOCOLOR®* TOC 300: 20–300 mg/L TOC
- Results available after only 2 hours
- Easy evaluation via barcode recognition



Quantitative determination of the generated CO<sub>2</sub> by an indicator (reaction basis analog to DIN EN 1484)



Color change



Oxidation of organic carbon compounds contained in the sample to CO<sub>2</sub>

