

MACHEREY-NAGEL

NANOCOLOR[®] 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

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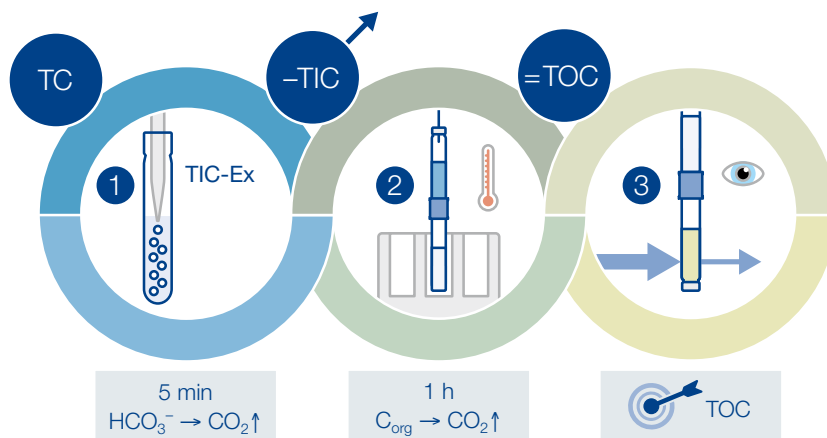
TOC determination in only three steps

TOC-analysis using NANOCOLOR®

Besides COD (chemical oxygen demand) and BOD₅ (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



1 Efficient sample preparation within 5 minutes

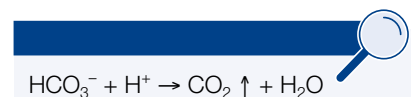
Removal of inorganic carbon with NANOCOLOR® TIC-Ex

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



$$\text{TOC} = \text{TC} - \text{TIC}$$



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 CO₂ by an indicator (reaction basis analog to DIN EN 1484)

Color change

$$C_{org} \xrightarrow{<Na_2S_2O_8>} CO_2 \uparrow$$

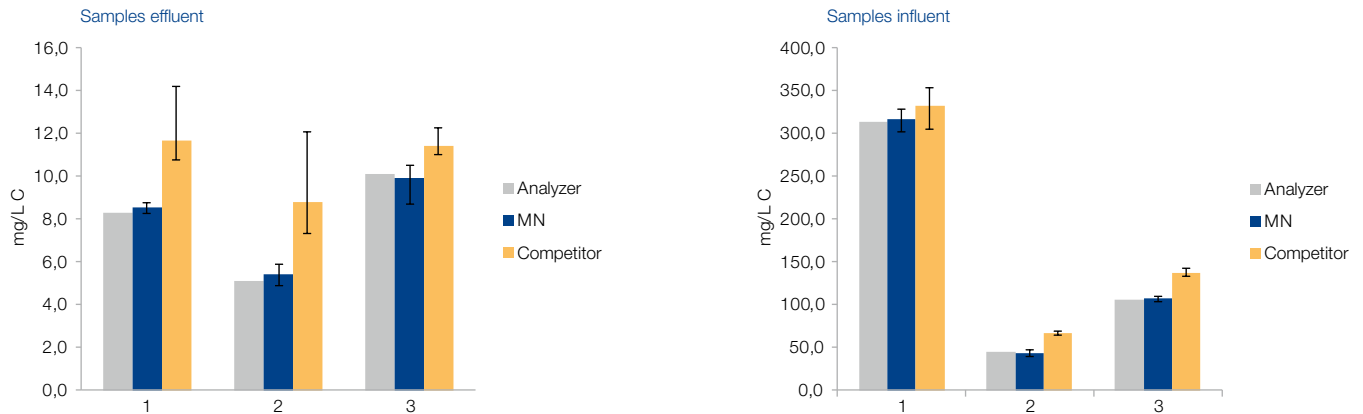
Oxidation of organic carbon compounds contained in the sample to CO₂

The image shows a rack of several cuvettes, each containing a blue liquid. The rack is placed on a white surface. Above the rack, the text 'Color change' is written, followed by a chemical equation: C_{org} → CO₂↑, with '<Na₂S₂O₈>' written above the reaction arrow. Below the rack, a caption reads: 'Oxidation of organic carbon compounds contained in the sample to CO₂'. A magnifying glass icon is positioned in the top right corner of the image area.

Excellent results in comparative measurements

Reliable results

The measurement safety of our tube tests was verified in comparison to other analytical methods. The results were in very good accordance compared to the TOC-Analyzer. The results prove the reliability and precision of NANOCOLOR® TOC tube tests.



Ordering information

Description	REF
NANOCOLOR® Tube tests TOC	
NANOCOLOR® TOC 30 (2–30 mg/L TOC)	985075
NANOCOLOR® TOC 300 (20–300 mg/L TOC)	985078
Accessories	
NANOCOLOR® TIC-Ex	916993
Spectrophotometer NANOCOLOR® VIS II	919650
Heating block NANOCOLOR® VARIO 4	919300
Protective cover with bores for TOC-tests	919309
Single standards for quality assurance	
NANOCONTROL TOC 30	92575
NANOCONTROL TOC 300	92578

Your local distributor

www.mn-net.com

MACHEREY-NAGEL



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