

Total Organic Carbon

Shimadzu, TOC-LCPH FA, E200



www.tue.nl/mmp

Introduction

Total organic carbon (TOC) is the amount of carbon found in an organic compound and is often used as a non-specific indicator of water quality. The organic carbon in water and wastewater is composed of a variety of organic compounds in various oxidation states. The TOC analyzer determines the Total Carbon (TC) and the Inorganic Carbon (IC) (dissolved carbon dioxide and carbonic acid salts). Subtracting the IC from the TC yields the Total Organic Carbon.



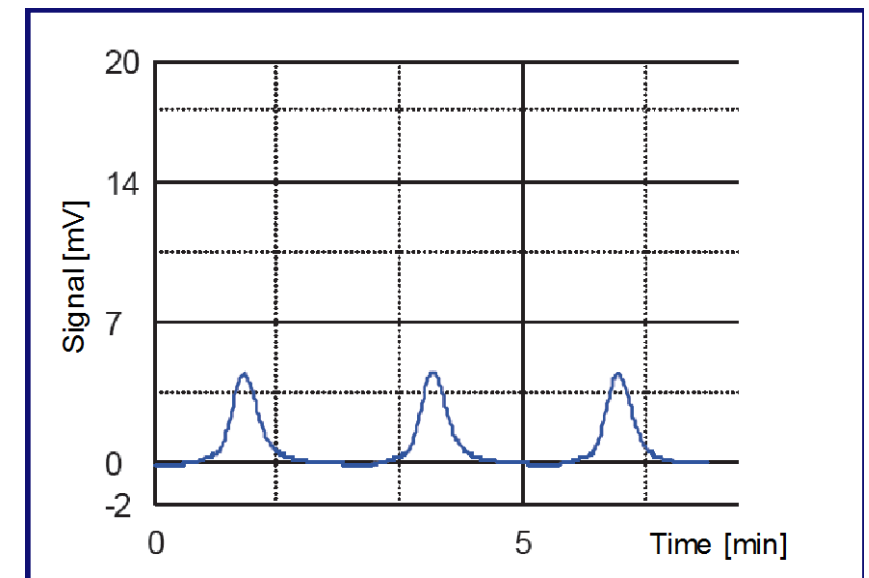
Principle

The TOC oxidizes by catalytic combustion at 680 °C organic carbon including the hard-to-decompose insoluble organic components to carbon dioxide (CO₂). The CO₂ is measured directly by a nondispersive infrared analyzer in the range 4 and 30,000 ppm/L.

Applications

- global environment and eutrophication
- drinking water, lakes, marshes, underground water sea water soil, sludge's and sediments
- effluent treatment process control
- membrane retention measurements

TOC analysis of river water



TOC measurement with:

- NPOC-Method
- acidification 1.5 %
- sparge-time 5 minutes
- TOC = 3.4 mg/L (RSD= 1.4 %)