

TOC analyser

Description/Parameters:

The Total Organic Carbon analyzer (Formacs™ HT-I, Skalar, Netherlands) serves as a scientific instrument for measuring the carbon content (total, organic, inorganic) in aqueous samples and suspensions. The analyzer operates based on high-temperature catalytic combustion followed by the detection of carbon dioxide in the exhaust gases using an infrared detector. Through calibrations, the instrument can interpret and determine the carbon content in a given sample within the range of 0.1 – 1,000 mg/L using the infrared detector output.



Possible analyses:

- TC analysis - the sample is directly injected into the catalytic furnace, and all generated carbon dioxide is detected and subsequently evaluated as the total carbon content in the sample (TC).
- IC analysis - the sample is initially injected into orthophosphoric acid, which acidifies it. The dissolved carbon dioxide and carbon dioxide released from present carbonates are then led through the catalytic furnace to the detector and subsequently evaluated as the inorganic carbon content in the sample (IC).
- NPOC analysis - hydrochloric acid is first added to the sample, followed by bubbling to displace dissolved CO₂ and purgable organic compounds. The modified sample is then injected into the catalytic furnace, and all generated carbon dioxide is detected and subsequently evaluated as the content of non-purgeable organic carbon content in the sample (NPOC)

Usage/Services:

According to the chosen analysis, determination of the carbon content (total, organic, inorganic) in water samples and water suspensions.