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欧陆科仪

ET1020A

Total Organic Carbon Analyzer



- ◎ DIN38409H3
- ◎ EN1484
- ◎ EPA415.1,415.3
- ◎ Standard Method 5310B (U.S.)
- ◎ GB 13193-91
- ◎ Water Quality Regulations for Drinking Water 138 (P.R.China)

The Model ET1020A TOC Analyzer is an automated system for the analyzing aqueous samples for total carbon (TC), total inorganic carbon (TIC), total organic carbon (TOC). The fixed volume sample loop introduction system allows repeatable analysis over a wide range of concentrations.

Operating Principles

Carbon compounds combust in an oxygen-rich environment, resulting in complete conversion of carbon to carbon dioxide (CO₂). TC is determined when the NDIR detector detects the resulting CO₂. TIC is determined by measuring CO₂ released following sample acidification. As the sample pH lowers, carbonate and bicarbonate ions convert to dissolved CO₂, which is purged from solution and swept into an NDIR detector. The NDIR detector is calibrated to display the mass of CO₂ detected. TOC is determined by performing separate TC and TIC analyses and subtracting the results.

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

Features

- Designed for analyzing samples containing up to 10,000 ppm C
- Combustion temperatures are adjustable from 200°C–950°C
 - 900°C – Not require a platinum catalyst bedor
 - 680°C – With a rugged platinum catalyst
- Fixed volume sample loops - reliable and consistent results
- ETTOC Windows-based software, easy-to-operate and user-friendly
- Particulates up to 400µm accepted
- the high oxidation efficiency and the selectivity of the NDIR detector – higher concentration TOC analysis

Specifications

Range	10 ppb C–10,000 ppm C
Precision	TC/TIC/TOC: 2% RSD
Analysis Time	TC/TIC/TOC: 4–8 min total
Particulates	<400 µm
Method	TC: 680°C with platinum catalyst, 900°C with zirconium packing TIC: acidification (H ₃ PO ₄) and sparging Furnace temperature: adjustable, 200°C–950°C in 1°C increments
Sample Introduction	Fixed volume sample loops: 25µL, 50µL, 100µL, 200µL, 400µL
Detection	Nondispersive infrared cell
Oxygen Requirements	<1 ppm CO ₂ , CO, and THC at 50–60 psig (345–415 kPa)
Power Requirements	220(±22) V, 50(±1)Hz
Environmental Requirements	Temperature: 10°C–40°C Relative humidity: <90% noncondensing
Dimensions	36 cm H x 28 cm W x 60 cm D
Weight	20 kg
Software	ETTOC(Chinese/English)
Communications	RS-232-C
User Interface Options	ETTOC Windows-based software
Other Options	Model ET3500 Vial Autosampler

Interface



ET1020A TOC Analyzer

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