



## EZ7701 Total Nitrogen Analyser

**Product #:** EZ7701.XXXXXXXXXX  
**AED Price:** Contact Hach

### Online, automatic monitoring of Total Nitrogen (TN) in wastewater and general water applications

The EZ7700 Series of Online TN Analysers meet the needs for fast, convenient and reliable monitoring of the regulatory sum parameter Total Nitrogen in wastewater and surface water applications.

Ammonia, nitrate and nitrite are three key nitrogen species that play an important role in decomposition of organic material in water and biological water treatment in particular. While data on individual levels of these provide operators of WWTP's insight in the biochemical processes, other organic and inorganic forms of nitrogen may also be of significance. Total Kjeldahl Nitrogen (TKN) was originally developed as a measure of organic nitrogen but in practice it was often considered as synonymous with Total Nitrogen (TN) due to the lack of other available technologies. Still today, TN is often confused with TKN.

The EZ7700 Series of Online TN Analysers were developed in the framework of a research project to provide operators and utilities a viable alternative for the complex and time-consuming TKN method. TN as measured by the EZ7700 comprises all components, organic and inorganic, of the nitrogen cycle by the analyser's proprietary sample digestion technique, now available in an industrial mainframe with a compact footprint:

- Full oxidation of all nitrogen species
- Smart automatic features
- Control and communication via industrial panel PC
- Standard 4 - 20 mA signal output with alarm processing
- Communication supporting Ethernet connectivity to Modbus TCP/IP
- Multiple stream analysis

There are many additional options available. Please contact Hach for more details.

---

## Specifications

Alarm:	1 x malfunctioning, 4 x user-configurable, max. 24 VDC/0.5 A, potential free contacts
Ambient temperature:	10 - 30 °C, $\pm 4$ °C deviation at 5 - 95% relative humidity (non-condensing)
Analogue outputs:	Active 4 - 20 mA max. 500 Ohm load, standard 1, max. 8 (option)
Automatic cleaning:	Yes
Calibration:	Automatic, 2-point; frequency freely programmable
Certifications:	CE compliant / UL certified

Cooling water:	Flow rate approx. 5 L/h; temperature max. 30 °C; pressure max. 0.5 bar
Cycle Time:	30 min including digestion of 10 min (standard)
Demineralised water:	For rinsing
Detection limit:	≤ 200 µg/L
Digital outputs:	Optional: Modbus (TCP/IP, RS485)
Dimensions (H x W x D):	690 mm x 465 mm x 330 mm
Drain:	Atmospheric pressure, vented, min. Ø 32 mm
Earth connection:	Dry and clean earth pole with low impedance (< 1 Ohm) using an earth cable of > 2.5 mm²
Flow rate:	100 - 300 mL/min
Instrument air:	Dry and oil free according to ISA-S7.0.01-1996 quality standard for instrument air
Interferences:	Antimony (III), Bismuth (III), Chloroplatinate, Gold (III), Iron (III), Lead (II), Mercury (II), Metavanadate, and Silver (I) can precipitate with Nitrate. The presence of Copper (II) may decompose the diazonium salt which results in a low result. Strong oxidising agents. $\text{NCl}_3$ results in a false red colour. Large amounts of colour and turbidity interfere. Fats, oil, proteins, surfactants and tar.
Material:	Hinged part: Thermoform ABS, door: PMMA
	Wall section: Galvanised steel, powder coated
Measurement method:	Colorimetric measurement at 546 nm using hydrazine reduction and NEDD colour solution after persulphate digestion in alkaline medium, conform with APHA 4500-N
Measuring range:	0.2 - 5 mg/L TN
Model:	EZ7701
Number of sample streams:	1, 2, 4, or 8
Parameter:	Total Nitrogen (TN)
Power:	230 VAC, 50/60 Hz
	120 VAC, 50/60 Hz
	Max. power consumption: 440 VA
Precision:	Better than 3% full scale range for standard test solutions
Protection class:	Analyser cabinet: IP55 / Panel PC: IP65
Reagent Requirements:	Keep between 10 - 30 °C
Sample pressure:	By external overflow vessel
Sample quality:	Maximum particle size 100 µm, < 0.1 g/L; Turbidity < 50 NTU
Sample temperature:	10 - 30 °C
Validation:	Automatic; frequency freely programmable
Warranty:	24 months
Weight:	25 kg
What's included?:	EZ7701 Total Nitrogen Analyser, Instruction Manual, 1 x Double Bit Door Key, 1 x Mounting Brackets, 1 x empty 2.5L Reagent Container with Fittings (Buffer Solution), 2 x empty 5L Reagent Containers with Fittings (Oxidation B & Reductor Solution), 1 x empty 10L Reagent Container with Fittings (Oxidation A Solution) and 1 x empty 2.5L Glass Reagent Container with Fittings (Colour Solution)

---

## What's included?

EZ7701 Total Nitrogen Analyser, Instruction Manual, 1 x Double Bit Door Key, 1 x Mounting Brackets, 1 x empty 2.5L Reagent Container with Fittings (Buffer Solution), 2 x empty 5L Reagent Containers with Fittings (Oxidation B & Reductor Solution), 1 x empty 10L Reagent Container with Fittings (Oxidation A Solution) and 1 x empty 2.5L Glass Reagent Container with Fittings (Colour Solution)