



## EZ2003 Total Manganese Analyser

**Product #:** EZ2003.XXXXXXXXXX  
**AED Price:** Contact Hach

### Online colorimetric analysis of Total Manganese in water

EZ2000 Total Manganese Analysers achieve excellent precision and accuracy. At the heart of the colorimeter there is a compact photometer assembly developed especially for the EZ Series. Consumption of reagents is reduced by low volume analysis, yet high sensitivity is assured by a long optical path length. The limit of detection is in the low  $\mu\text{g/L}$  range.

EZ2000 Total Manganese Analysers have an internal digestion unit. This additional step prior to analysis allows to measure non-soluble or complexed metal species.

### Results you can rely on

Smart automatic features for calibration, validation, priming and cleaning are embedded in the controller software and contribute to analytical performance, maximised uptime and negligible operator intervention. Precision micropumps dose all reagents. Sample lines and analysis vessel are cleaned with demineralised water to eliminate cross contamination between samples. Electronic and wet-chemical part of the analyser are strictly separated. A transparent door allows for instant visual inspection of the wet part.

### Flexibility that meets your needs

EZ Series Total Manganese Analysers come in an attractive, ergonomic mainframe with a compact footprint. All hardware is controlled by the integrated industrial panel PC. The modular build allows for the analyser to match your application and operational needs.

- The standard measuring range can be narrowed by a different calibration range or extended via internal dilution options.
- Analogue and digital output options
- Multiple stream analysis for up to 8 sample streams

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

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## 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)                       |
| Calibration:         | Automatic, 2-point; frequency freely programmable                                     |
| Certifications:      | CE compliant / UL certified   |

|                           |  |
|---------------------------|--|
| Cycle Time:               | 20 min Total Mn (dilution + 5 min)   |
|                           | 30 min Total Mn & Mn (II)  |
| Demineralised water:      | For rinsing / dilution   |
| Detection limit:          | ≤ 4 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:            | 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 using formaldoxime method at 450 nm   |
| Measuring range:          | 0.02 - 1 mg/L Mn   |
|                           | Optional:  |
|                           | 0.004 - 0.1 mg/L   |
|                           | 0.01 - 0.25 mg/L   |
|                           | 0.01 - 0.5 mg/L  |
|                           | 0.16 - 4 mg/L (with internal dilution)   |
|                           | 0.32 - 10 mg/L (with internal dilution)  |
|                           | 2 - 20 mg/L (with internal dilution)   |
| Number of sample streams: | 1, 2, 4 or 8   |
| Parameter:                | Manganese, total   |
| Power:                    | 230 VAC, 50/60 Hz  |
|                           | 120 VAC, 50/60 Hz  |
|                           | Max. power consumption: 440 VA   |
| Precision:                | Better than 2% full scale range for standard test solutions  |
| Protection class:         | Protection class: Analyser cabinet: IP44 / 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?:         | EZ2003 Manganese Analyser, Instruction Manual, 1 x Double Bit Door Key, 1 x Mounting Brackets, 4 x empty 2.5L Reagent Containers with Fittings (for Acid, Reductor, Buffer, Colour & Mixed Reagent Solution) and 1 x empty 10L Reagent Container with Fittings (for EDTA Solution) |

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