



EZ7251 Volatile Fatty Acids (VFA) & Alkalinity Analyser

Product #: EZ7251.XXXXXXXXXX
AED Price: Contact Hach

Online, automatic monitoring of critical process parameters and process efficiency in anaerobic digesters

A new control alternative for anaerobic digestion

Due to the expensive or time-consuming character of most analysis methods for anaerobic processes, industrial digesters are usually not adequately monitored. Developed specifically for monitoring anaerobic digesters, the EZ7200 Series bring the possibility of implementing new control alternatives to typical operating problems in mid to large scale digesters.

Critical parameter monitoring, online and automatic

Anaerobic digesters require monitoring of a specific set of critical parameters in order to obtain optimal production efficiency, compliance and biogas yield. The primary parameter is volatile fatty acids (VFAs), representing the metabolic condition of the anaerobic digester and responding quickly to stress induced changes, combined with alkalinity.

The EZ7200 Series are easy-to-operate online titrators using a unique and robust method for measuring the critical process parameters in one single run, enabling insight as well as full control over the anaerobic process:

- Direct titration with minimum volatilisation
- Continuous monitoring of the anaerobic process
- Enabling higher loading rate for maximum CH₄ production
- Prevention of digester failure due to VFA accumulation
- Easy implementation within a dynamic control strategy
- Easy integration into corporate networks

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 ±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; frequency freely programmable
Certifications:	CE compliant / ETL certified

Cycle Time:	10 - 15 minutes
Demineralised water:	N.A.
Detection limit:	≤ 10 mg/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:	Phosphates and similar dissociating ions and non-fatty acids which on acidification from undissociated acids may cause interference. Sulphide may deteriorate some types of pH electrodes. Fats, oil, proteins, surfactants and tar.
Material:	Hinged part: Thermoform ABS, door: PMMA
	Wall section: Galvanised steel, powder coated
Measurement method:	Acid-base titration
Measuring range:	VFAs 20 - 1000 mg/L as acetate equivalent;
	Alkalinity, total and Alkalinity, partial 50 - 2500 mg/L as CaCO ₃
Method:	Titrimetric
Number of sample streams:	1, 2, or 4
Parameter:	Volatile fatty acids (VFAs), total alkalinity
Power:	100 - 240 VAC, 50/60 Hz
	Max. power consumption: 120 VA
Precision:	Better than 3% full scale range for standard test solutions
Protection class:	Analyser cabinet: IP44 / Panel PC: IP65
Reagent Requirements:	Keep between 10 - 30 °C
Rinsing:	With tap water
Sample pressure:	By external overflow vessel
Sample quality:	Maximum particle size 500 µm, < 0.1 g/L
	Most applications require the use of an EZ9130 sampling/filtration system.
Sample temperature:	10 - 30 °C
Validation:	Automatic; frequency freely programmable
Warranty:	24 months
Weight:	25 kg
What's included?:	EZ7251 VFA & Alkalinity Analyser, Instruction Manual, 1 x Double Bit Door Key, 1 x Mounting Brackets, 1 x pH Electrode, Routine S7 Connection, 1 x empty 2.5L Reagent Container with Fittings (Anti-foam Solution) and 2 x empty Reagent Containers with Fittings (H ₂ SO ₄ & NaOH Solution)

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