

**COMPOSER Joseph Lanner - Online-Analyser for Iron and Manganese**

**Basic Information**

This Instrument was developed and built for Drinking Water Industry.

**Drinking water.** Iron may be present in drinking-water as a result of the use of iron coagulants or the corrosion of steel and cast iron pipes during water distribution. There is usually no noticeable taste at iron concentrations below 0.3 mg/litre, and concentrations of 1-3 mg/litre can be acceptable for people drinking anaerobic well water. Manganese is naturally occurring in many surface water and groundwater sources, particularly in anaerobic or low oxidation conditions. A provisional health-based guideline value of 0.5 mg/litre should be adequate to protect public health.

**Toxicity.** Iron is an essential element in human nutrition. Portable water should contain iron not more than 0.2 mg/L. Ground water may contain iron at concentrations of several milligrams per litre.

**Method**

Metal is measured as chelate complex between metal ions in the waste water and sensitive spectrophotometric reagent dye. Change of the intensity of the visible light throughout measurement

chamber containing formed metal complex is directly proportional to metal concentration.



**Advantage of the system**

- Non toxic chemistry.
- Robust design.
- Minimal maintenance.
- Easy handling.
- High accuracy and precision.
- Suitable for mission critical applications.
- Automated cleaning and calibration.

<b>System information</b>	
Measurement variable	Iron (total Fe) Manganese (Mn)
Measurement application	Drinking water.
Measurement ranges	0.005 – 1.00 mg/L (ppm) Fe 0.005 – 1.00 mg/L (ppm) Mn
Accuracy and Precision	± 3 % (based on full scale)
Resolution	0.005 mg/L
Calibration and cleaning	automated
Seibold Reagent kit	Buffer and Dye Provided by Sigma Aldrich

Continuous Analysis. Reliable Results.

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<b>MEASUREMENT INFORMATION</b>
<b>Measurement method</b>
Spectrophotometric (LED, detector)
<b>Measurement interval</b>
Continuous; Discontinuous (programmable, external start)
<b>Sample and Reagents consumption per measurement</b>
Sample: ~ 75 - 200 ml
Seibold Buffer and Reagent: ~ 3 ml
<b>ENVIRONMENTAL DATA</b>
Ambient operating temperature, sample temperature: 5 to 40°C
Ambient operating humidity: Up to 95 % RH non-condensing
<b>ELECTRICAL DATA</b>
<b>Power supply</b>
Supply voltage: 220 ... 230 V AC, 50...60 Hz (110 V AC or 24 V DC, optional)
Power consumption: approx 50 VA
Output signal: 4...20 mA
<b>Screen</b>
Color, TFT, liquid crystal display (LCD) with built-in backlight and brightness adjustment.
<b>MAINTENANCE</b>
Maintenance interval: 3 months



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