Continuous Analysis. Reliable Results.

COMPOSER Carl Zeller - SEIBOLD Online-Analyser for Cadmium

Sources

Cadmium compounds belong to the most hazardous pollutants in the environment.
Industry. Cadmium metal is used in the steel industry and in plastics. Cadmium compounds are widely used in batteries.
Drinking water. Contamination in drinking-water may also be caused by impurities in the zinc of galvanized pipes and solders and some metal fittings. A guideline value of 0.005 mg/litre was recommended for cadmium in drinking-water.
Toxicity. Cadmium is toxic to a wide range of organs. Primary targets are the kidneys, bone, and the lung.

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

Advantage of the system

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

System information	
Measurement variable	Cadmium (Cd)
Measurement application	Drinking water, river monitoring, electroplating and semiconducting industry
Measurement ranges	0.005 – 1.000 mg/L (ppm) other ranges possible upon request
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

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MEASUREMENT INFORMATION
Measurement method
Spectrophotometric (LED, detector)
Measurement interval
Continuous; Discontinuous (programmable, external start)
Sample and Reagents consumption per measurement
Sample: ~ 75 - 200 ml
Seibold Buffer and Reagent: ~ 3 ml
ENVIRONMENTAL DATA
Ambient operating temperature, sample temperature: 5 to 40°C
Ambient operating humidity: Up to 95 % RH non-condensing (bellow the condensation limit)
ELECTRICAL DATA
Power supply
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
Screen
Color, TFT, liquid crystal display (LCD) with built-in backlight and brightness adjustment.
MAINTENANCE
Maintenance interval: 3 months

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