Continuous Analysis. Reliable Results.

COMPOSER Gustav Mahler - SEIBOLD Online-Analyser for Cobalt

Sources

Natural sources. Natural sources of cobalt in the environment are soil, dust, seawater, volcanic eruptions and forest fires.
Industry. Cobalt is used for for the manufacture of alloys, hard metals and magnets.
Drinking water. A guideline value of 0.01 mg/litre was recommended for cobalt in drinking-water.
Toxicity. As a constituent of vitamin B12, cobalt is an essential element and, so far, another physiological role of cobalt has not been demonstrated in human nutrition.

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	Cobalt (Co)
Measurement application	Drinking water, river monitoring, electroplating and semiconducting industry
Measurement ranges	0.01 – 1.00 mg/L (ppm) other ranges possible upon request
Accuracy and Precision	± 3 % (based on full scale)
Resolution	0.01 mg/L
Calibration and cleaning	automated
Seibold Reagent kit	Buffer and Dye Provided by Sigma Aldrich

Myriad Electronic Solutions Inc. d.b.a. ES Canada
151 W Hastings, Vancouver, BC, V6B 1H4
Tél. 778-652-2717
e-mail : info@es-canada.com
Site Web : www.es-canada.com

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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