

COMPOSER Heinz Karl Gruber - SEIBOLD Online-Analyser for Tin

Sources

Tin is a post-transition metal and found in cassiterite, which is made up to 80% of Tin. Most tin is found in alluvial deposits, riverbeds and former riverbeds, as a result of erosion of ore bodies containing the metal.

Industry.

Tin is soft, easy to melt metal and because of its characteristic used in many alloys. Tin's more modern application is as a solder for the electronics industry. Used in various purities and alloys (often with lead or indium), tin solders have a low melting point, which makes them suitable for bonding materials.

Toxicity. Tin has a low toxicity but organotin compounds are highly toxic.

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	Tin (Sn)
Measurement application	Drinking water, river monitoring, electroplating and semiconducting industry
Measurement ranges	0.05 – 2.00 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

COMPOSER Heinz Karl Gruber - SEIBOLD Online-Analyser for Tin

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

