*Continuous Analysis. Reliable Results.*

# *COMPOSER Alban Berg- Online-Analyser for Total Copper and Nickel*

## Basic Information

This process analyser was developed and built for industrial waste water and drinking water Industry. The main advantages are the combined measurement in one measurement step and the use of non toxic and non hazardous reagents.

***Industry.*** Nickel and Copper are used in alloys (stainless steel), electroplating, foundries, catalysts, welding rods and coinage, and can be found in electronic equipment, construction materials, aerospace equipment and consumer goods such as batteries, paints and ceramics.

***Drinking water.*** Copper concentrations in drinking-water vary widely, with the primary source most often being the corrosion of interior copper plumbing. A guideline value of 1.5 mg/litre was recommended for copper in drinking water.

***Toxicity.*** Inhaled nickel compounds are carcinogenic to humans and that metallic nickel is possibly carcinogenic. Allergic contact dermatitis is the most prevalent effect of nickel in the general population.

## Method

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

| System information | |
|---|---|
| Measurement variable | Copper (total Cu)<br>Nickel (total Ni) |
| Measurement application | Industrial Waste Water, Drinking water. |
| Measurement ranges | 0.01 – 1.00 mg/L (ppm) Ni<br>0.01 – 1.00 mg/L (ppm) Cu |
| Accuracy and Precision | ± 3 % (based on full scale) |
| Resolution | 0.005 mg/L |
| Calibration and cleaning | automated |
| Seibold Reagent kit | Buffer and Dye |

*Continuous Analysis. Reliable Results.*

# *COMPOSER Alban Berg- Online-Analyser for Total Copper and Nickel*

| **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 |
| **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, MODBUS, Profibus DP. |
| **Screen** |
| Color, TFT, liquid crystal display (LCD) with built-in backlight and brightness adjustment. |
| **MAINTENANCE** |
| Maintenance interval: 6 months |


**SEIBOLD Wasser-Analysatorenfabrik GmbH,** Industriepark Donau, Inkustrasse 1-7/5/2, A-3400 Klosterneuburg, phone: +43 22 43 20 787, web: www.seibold-wasser.at, e-mail: office@seibold-wasser.at