*Continuous Analysis. Reliable Results.*

# *COMPOSER Johann G.Albrechtsberger - SEIBOLD Online-Analyser for Zinc*

## Sources

Zinc is an essential trace element found in virtually all food and potable water in the form of salts or organic complexes.
***Natural sources.*** Zinc species are predominantly determined in the aquatic environment and in soils and sediments.
***Industry.*** Zinc is used principally inelectroplating and semiconducting industry.
***Drinking water.*** Although levels of zinc in surface water and groundwater normally do not exceed 0.01 and 0.05 mg/litre, respectively, concentrations in tap water can be much higher as a result of dissolution of zinc from pipes. Drinking-water containing zinc at levels above 3mg/litre may not be acceptable to consumers.
***Toxicity.*** Zinc or zinc compounds are not listed as suspected carcinogens. Zinc compounds can produce irritation and corrosion of the gastrointestinal tract, along with acute renal tubular necrosis and interstitial nephritis.

## 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 | Zinc (Zn) |
| Measurement application | Drinking water, river monitoring, electroplating and semiconducting industry |
| Measurement ranges | 0.005 – 1.00 mg/L (ppm)<br>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<br>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 |


**SEIBOLD Wasser-Analysatorenfabrik GmbH,** Büropark 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