**Instrument specific information**

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

<table>
<thead>
<tr>
<th>Instrument Type</th>
<th>Cuvette</th>
<th>$\lambda$</th>
<th>Measuring Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD 100, MD 110, MD 600, MD 610, MD 640, XD 7000, XD 7500</td>
<td>$\phi$ 24 mm</td>
<td>610 nm</td>
<td>0.1 - 2.5 mg/l Zn</td>
</tr>
</tbody>
</table>

**Material**

Required material (partly optional):

<table>
<thead>
<tr>
<th>Reagents</th>
<th>Packaging Unit</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc Reagent 1/Zinc Reagent 2</td>
<td>1 pc.</td>
<td>56R023965</td>
</tr>
<tr>
<td>KS 89 - Cationic Suppressor</td>
<td>65 ml</td>
<td>56L008965</td>
</tr>
</tbody>
</table>

**Application List**

- Waste Water Treatment
- Raw Water Treatment
- Cooling Water
- Galvanization

**Notes**

1. The measuring spoon supplied with the reagents must be used for the correct dosage.
2. This test is suitable for the determination of free soluble zinc. Zinc, which is bound to strong complexifying agents, is not measured.
Implementation of the provision Zinc with liquid reagent and powder

Select the method on the device
For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500

**Fill 24 mm vial with 10 ml sample.**

**Close vial(s).**

**Place sample vial in the sample chamber. • Pay attention to the positioning.**

**Press the ZERO button.**

**Remove the vial from the sample chamber.**

For devices that require no ZERO measurement, start here.

**Hold cuvettes vertically and add equal drops by pressing slowly.**

**Add 20 drops KS243 (Zinc Reagent 1).**

**Close vial(s).**
Invert several times to mix the contents.

Add a measuring scoop KP244 (Zinc Reagent 2).

Close vial(s).

Swirl around to dissolve the powder.

Place sample vial in the sample chamber. • Pay attention to the positioning.

The result in mg/l Zinc appears on the display.

Test

Press the TEST (XD: START) button.
Chemical Method
Zincon / EDTA

Appendix

Calibration function for 3rd-party photometers
Conc. = a + b \cdot Abs + c \cdot Abs^2 + d \cdot Abs^3 + e \cdot Abs^4 + f \cdot Abs^5

<table>
<thead>
<tr>
<th>ø 24 mm</th>
<th>□ 10 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>-2.34614 \cdot 10^{-1}</td>
</tr>
<tr>
<td>b</td>
<td>2.37378 \cdot 10^{0}</td>
</tr>
<tr>
<td>c</td>
<td>-1.49877 \cdot 10^{0}</td>
</tr>
<tr>
<td>d</td>
<td>7.39829 \cdot 10^{1}</td>
</tr>
<tr>
<td>e</td>
<td></td>
</tr>
<tr>
<td>f</td>
<td></td>
</tr>
</tbody>
</table>

Interferences

Removeable Interferences
• Cationics such as quaternary ammonium compounds will cause the colour to change from rose red to purple, depending upon the level of copper present. In this event add drops of KS89 (cationic suppressor) one at a time, until it turns orange/blue. Note: After adding each drop, swirl the vial.

Bibliography
Photometrische Analyseverfahren, Schwedt, Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart 1989
S.M. Khopkar, Basic Concepts of Analytical Chemistry (2004), New Age International Ltd. Publishers, New Delhi, p. 75