ZINC
(Colorimetric Test with 5-Brom-PAPS)

<table>
<thead>
<tr>
<th>Cat.No</th>
<th>Package Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>184 000</td>
<td>2x 50 ml R1 / Standard</td>
</tr>
<tr>
<td>184 016</td>
<td>9x 10 ml R1 / Standard</td>
</tr>
</tbody>
</table>

**PRINCIPLE**
Zinc forms with 2-(5-Brom-2-pyridylazo)-5-(N-propyl-N-sulfopropylamino)-phenol a red chelate complex. The increase of absorbance can be measured and is proportional to the concentration of total zinc in the sample.

**REAGENT**
Composition (concentrations in the test)

1. **Monoreagent (ready for use)**
   - 5-Br-PAPS  0.02 mmol/l
   - Bicarbonate buffer pH 9.8  200 mmol/l
   - Sodiumcitrate  170 mmol/l
   - Dimethylglyoxime  4 mmol/l
   - Detergent  1%

2. **Standard**  200 µg/dl (30.6 µmol/l)

**STABILITY**
The sealed reagent is stable up to the indicated expiry date if stored at 2° - 25°C.

**REFERENCE VALUES**
Serum/Plasma
Men:  72.6 – 127 µg/dl (11.1-19.5 µmol/l)
Women: 70.0 – 114 µg/dl (10.7-17.5 µmol/l)
(During pregnancy and menstruation the concentration of zinc can be very low)

Children: 63.8 – 110 µg/dl (9.8-16.8 µmol/l)
New born: 49.5 - 99.7 µg/dl (7.6-15.3 µmol/l)

**SAMPLE MATERIAL:**
Serum, Plasma, Urine

**LINEARITY:**
Up to 400 µg/dl (61.2 µmol/l)

**ASSAY PROCEDURE**

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>Sample</th>
<th>RBL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reagent</td>
<td>1000µl</td>
<td>1000µl</td>
<td>1000µl</td>
</tr>
<tr>
<td>Sample</td>
<td>-</td>
<td>50µl</td>
<td>-</td>
</tr>
<tr>
<td>Standard</td>
<td>50µl</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Mix and incubate for 10 min at 25°C or 5 min at 37°C. Measure against reagent blank (RBL) the absorbance of the sample = A_S, and of standard = A_STD

**CALCULATION:**

\[
\mu g/dl\ zinc = \frac{A_S}{A_{STD}} \times 200 \\
\mu mol/l\ zinc = \frac{A_S}{A_{STD}} \times 30.6
\]

**CALIBRATION & QUALITY CONTROL**
For the calibration of automated analyzers Greiner Multicalibrator is recommended, for quality control use Greiner normal and abnormal controls, Unitrol I and Unitrol II.

**LITERATURE:**

**SYMBOLS USED**

- **IVD**  For in vitro diagnostic medical use
- **LOT**  Batch Code
- **Use by**  Temperature limitation