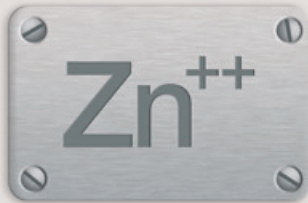


LAB

# The key to oligoelements



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# The key to oligoelements

Oligoelements (essential trace elements) have the specific and irreplaceable function of ensuring the optimal performance of the entire organism as well as activating the catalytic sites of enzymes.

Some of these essential trace elements (Fe, Cu, Mo) play a very important biological role in the redox process by interacting with donor atoms of electrons such as nitrogen, sulphur and oxygen, whereas other trace elements (Zn, Ni) carry out their purpose bound to specific substrates.

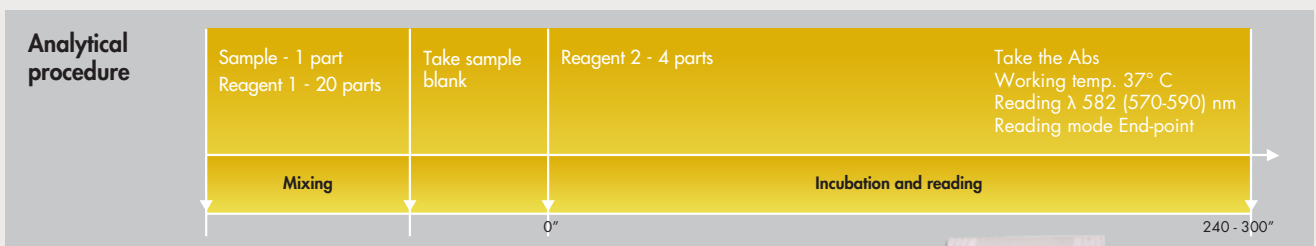
The functional specificity of oligoelements is enhanced by specific carrier and storage proteins such as transferrin and ferritin for iron, ceruloplasmin for copper, albumin and alpha-2-Macroglobulin for zinc and nickeloplasmin for nickel. These proteins recognise and bind with oligoelements in a specific manner, ensuring their reserves and transporting them to specific sites in the organism. Homeostatic regulation provides and ensures the optimal distribution of the oligoelements in the organism. The most common analytical methods for the quantitative measurement of oligoelements present in biological fluids are through the use of atomic absorption spectrophotometry and colorimetric methods with specific chromogenic chelants with a high molar extinction coefficient.



## Copper

### The method

Copper ( $\text{Cu}^{++}$ ), freed from ceruloplasmin, its carrier protein, and reduced to  $\text{Cu}^+$ , forms with a specific complexant DiBr-PAESA a stable coloured complex, the intensity of which is directly proportional to the concentration of copper present in the sample.



### The unmatched advantages

- Sample: serum, heparin-plasma, (Ref 17106 and Ref 17638); unconcentrated urine (Ref 17109)
- Increased linearity up to 500  $\mu\text{g}/\text{dL}$  for serum and plasma and up to up 20  $\mu\text{g}/\text{dL}$  for urine
- 36 months stability from date of manufacture
- Applications for the most commonly used analyzers available upon request
- Simplified analytical procedure and rapid use: the test can be carried out in 5 minutes
- Excellent correlation with atomic absorbance
- Increased analytical sensitivity and method precision
- Reagents (Ref 17638) filled in vials compatible with Hitachi 911/912, Ilab 600/640, Abbott Aeroset® and Architect®
- Calibrator included in the kit

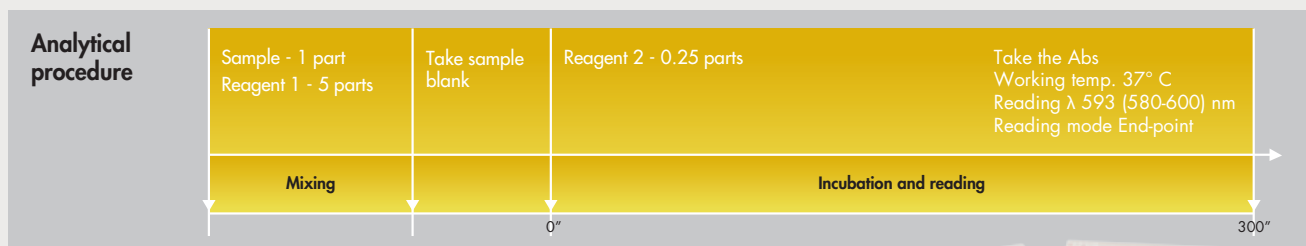


Ref.	Description	Kit Size
17106	Copper	R1: 5x10; R2: 1x3 mL
17638	Copper	R1: 5x20; R2: 1x21 mL
17109	Copper Urine	4x3 mL
16150	Clin Chem Control 1	6x5 mL
16250	Clin Chem Control 2	6x5 mL

# Iron

## The method

Iron ( $\text{Fe}^{+++}$ ), freed from transferrin (TRF), its carrier protein, and reduced to  $\text{Fe}^{++}$  ions, forms, with the specific Ferene™ complexant, a coloured stable complex, the intensity of which is directly proportional to the concentration of iron present in the sample. The use of a specific chelate eliminates the interference of copper ions.



## The unmatched advantages

- Sample: serum, heparin-plasma
- Increased linearity up to 1000  $\mu\text{g}/\text{dL}$
- 24 months stability from date of manufacture
- Applications for the most commonly used analyzers available upon request
- Simplified analytical procedure and rapid use: the test can be carried out in 5 minutes
- Excellent correlation with atomic absorbance and other similar methods on the market
- Increased analytical sensitivity and method precision
- Reagents (Ref 17648) filled in vials compatible with Hitachi 911/912, Ilab 600/640, Abbott Aeroset® and Architect
- Calibrator included in the kit

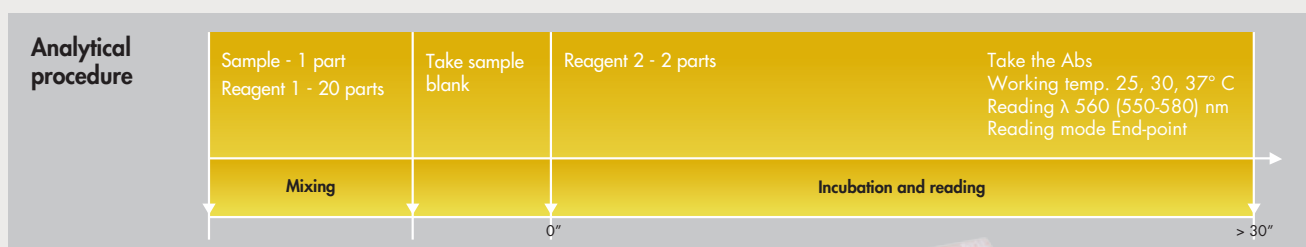


Ref.	Description	Kit size
17101G	Iron Liquid	R1: 2x100; R2: 1x10 mL
17648	Iron Liquid	R1: 4x45; R2: 1x17 mL
16150	Clin Chem Control 1	6x5 mL
16250	Clin Chem Control 2	6x5 mL

# Zinc

## The method

Zinc ( $\text{Zn}^{++}$ ) forms with the specific complexant 5-Br-PAPS a stable coloured complex, the intensity of which is directly proportional to the concentration of zinc present in the sample. The use of a specific chelate and the reaction conditions (pH) eliminate any interference from iron or copper ions.



## The unmatched advantages

- Sample: serum, heparin-plasma, seminal fluid
- Increased linearity up to 2000  $\mu\text{g}/\text{dL}$
- 30 months stability from date of manufacture
- Applications for the most commonly used analyzers available upon request
- Simplified analytical procedure
- Excellent correlation with atomic absorbance
- Increased analytical sensitivity and method precision
- Reagent (Ref 17640) filled in vials compatible with Hitachi 911/912, Ilab 600/640, Abbott Aeroset® and Architect®
- Calibrator included in the kit



Ref.	Description	Kit Size
17255	Zinc	R1: 5x10; R2: 1x5 mL
17640	Zinc	R1: 5x20; R2: 1x11 mL
16150	Clin Chem Control 1	6x5 mL
16250	Clin Chem Control 2	6x5 mL

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In fact we are convinced that accurate and reliable laboratory analysis is a fundamental contribution to health and an invaluable guarantee for all.

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### **Sentinel CH. SpA**

Via Robert Koch, 2  
20152 Milano (Italy)  
Phone: +39 02 3455141  
Fax: +39 02 34551464  
sentinel@sentinel.it  
www.sentinel diagnostics.com



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