LAB

MORE THAN 30 YEARS SENTINEL DIAGNOSTICS

Quality, safety, responsibility. Sentinel Diagnostics.

For over 30 years Sentinel has been committed to the development of innovative IVD devices, using the most advanced technology and investing significant resources in research to make clinical diagnosis ever more reliable.

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

Today we provide clients in over 50 nations worldwide with clinical chemistry and immuno chemistry solutions.

"Watching over life" wherever we are.

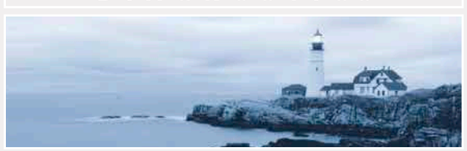
DR.432 REV 02 09/14

Sentinel CH. SpA
Via Robert Koch, 2
20152 Milan - Italy
Phone: +39 02 3455141
Fax: +39 02 34551464
sentinel@sentinel.it
www.sentineldiagnostics.com

CE

in vitro diagnostics IVD INFORMAZIONI DI VALORE PER LA DIAGNOSI

SENTINEL DIAGNOSTICS



WATCHING OVER LIFE

LAB

The key to oligoelements

SENTINEL DIAGNOSTICS

LAB

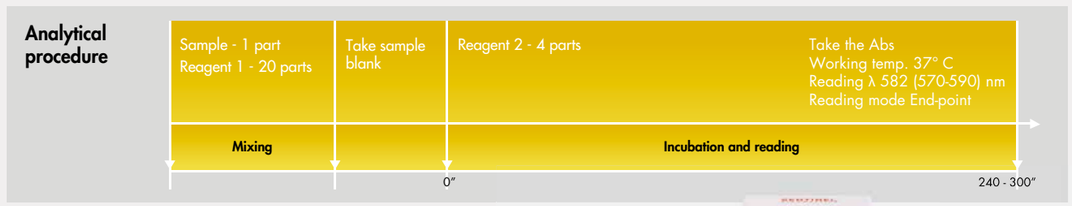
The key to oligoelements

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 (Cu^{++}), freed from ceruloplasmin, its carrier protein, and reduced to 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.



Features and Advantages

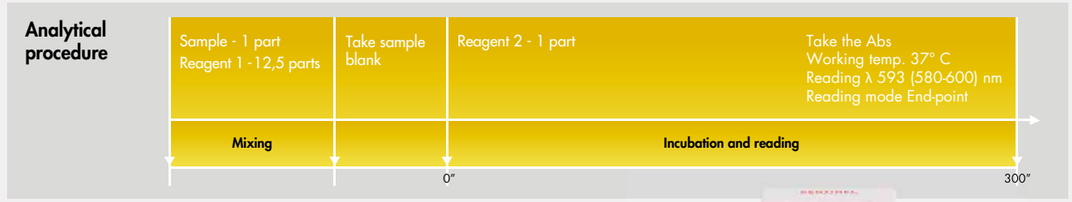
- Sample: serum, heparin-plasma, (Ref 17106 and Ref 17638H); unconcentrated urine (Ref 17109)
- Sensitivity: 3 µg/dL
- Increased linearity up to 500 µg/dL for serum and plasma and up to up 20 µg/dL for urine
- 36 months stability from date of manufacture
- Applications for the most commonly used analyzers available upon request
- Simplified analytical procedure and rapid use: the test can be carried out in 5 minutes
- Excellent correlation with atomic absorbance
- Reagents (Ref 17638H) filled in Universal Vials suitable for AU series, ADVIA series, Roche Modular, Hitachi 917, DIRUI series, Mindray BS-800
- Calibrator included in the kit

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

Iron

The method

Iron (Fe^{+++}), freed from transferrin (TRF), its carrier protein, and reduced to 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.



Features and Advantages

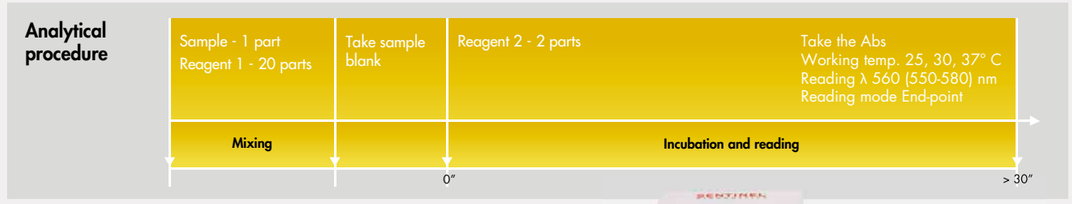
- Sample: serum, plasma (EDTA, heparin)
- Sensitivity: 5.0 µg/mL
- Increased linearity up to 1000 µg/dL
- 24 months stability from date of manufacture
- Applications for the most commonly used analyzers available upon request
- Simplified analytical procedure and rapid use: the test can be carried out in 5 minutes
- Excellent correlation with other similar methods on the market
- Reagents (Ref 17648H) filled in Universal Vials suitable for AU series, ADVIA series, Roche Modular, Hitachi 917, DIRUI series, Mindray BS-800

Ref.	Description	Kit size
17648H	Iron Liquid	R1: 3x65 mL; R2: 1x15 mL
16150	Clin Chem Control 1	6x5 mL
16250	Clin Chem Control 2	6x5 mL
16550	Clin Chem Cal	4x3 mL

Zinc

The method

Zinc (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.



Features and Advantages

- Sample: serum, heparin-plasma, seminal fluid
- Sensitivity: 5 µg/dL
- Increased linearity up to 2000 µg/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
- Reagent (Ref 17640H) filled in Universal Vials suitable for AU series, ADVIA series, Roche Modular, Hitachi 917, DIRUI series, Mindray BS-800
- Calibrator included in the kit

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