ZINC

Colorimetric Method **25 Tests**

PRINCIPLE :

Zinc present in the sample is chelated by zincon (2-caboxy-2′-hydroxy-5-Sulfoformazyl-benzene) in the reagent at alkaline pH. The formation of this complex is measured at a wavelength of 610 nm.

SAMPLE :

Serum, heparine plasma, C.S.F. and urine.
EDTA cannot be used.

NORMAL VALUES :

Serum or heparine Plasma:
16 – 25 µmol/L (109-167µg/dl)
Urine:
69 ± 25 µmol/day (451± 165 µg/day)

It is recommended that each laboratory should assign its own normal range as this is dependent upon geographical location.

REAGENTS :

1-	Standard	30.6 µmol/L (200 µg/dl)
2-	Buffer :	
	Carbonate buffer (pH 9.5)	50 mM /L
	Detergent	
	Stabilizer	
3-	Chromogen :	
	Zincon	0.05 mM /L

STABILITY :

The reagents are stable up to the expiry date when stored at +4°C .

PROCEDURE :

Pipette into test tubes (free of Zinc)

	Blank ml	Standard ml	Sample ml
D. Water	0.5	-	-
Standard (R1)	-	0.5	-
Sample	-	-	0.5
Buffer (R_2)	0.5	0.5	0.5
Chromogen (R_3)	0.5	0.5	0.5

Mix, incubate for 10 min at 25°C. Measure the absorbance of standard ($A_{standard}$) and sample (A_{sample}) against the reagent blank at 610 nm (660 - 620 nm) within 15 minutes. Linearity up to 153 µmol/l (1000 µg/dl)

CALCULATION :

Zinc in sample (µmol/l or µg/dl)

$$= \frac{A_{Sample}}{A_{Standard}} \times \text{Standard Conc.}$$

NOTES:

1- **All glassware must be immersed in dilute HCL or dilute HNO_3 and then rinsed in DDH_2O.**
2- **Rubber cap of Commercial Control serum or sample tube can be a cause of zinc contamination.**

QUALITY CONTROL:

For accuracy and reproducibility control:
Assayed Multi-Sera Normal and Elevated.

REFERENCE :

Hayakawa R. Jap J. Toxic Environ. Health 8, 14 – 18 (1961)

BIODIAGNOSTIC
DIAGNOSTIC AND RESEARCH REAGENTS

ZINC

Colorimetric Method
+ 4 to - 8 ºC 25 Tests
In vitro diagnostic use

CAT. NO. Zn 21 20

REAGENTS

R1	Standard	**15**	**ml**
R2	Buffer	**15**	**ml**
R3	Chromogen	**15**	**ml**

CONTACTS

Tele: 02-33385184
Mobil: 0109 – 349 20 77
Fax : 02-33385184 (102)
e.maile : info@bio-diagnostic.com
Website: www.bio-diagnostic.com
Adress: 29 Tahreer St., Dokki, Giza, Egypt