

CALCIUM

Colorimetric Method

50 Tests

PRINCIPLE :

Calcium ion produces with methylthymol blue, in an alkaline medium, a blue color the intensity of which is in proportion to the calcium concentration. The presence of hydroxy 8-quinoline eliminate the interference due to the magnesium ions.

SAMPLE :

Serum. heparinized plasma or urine. Dilute urine 1 + 3 multiply result by 4 .

NORMAL VALUES :

Serum Adults:	8.1 – 10.4 mg / dL (2.02 –2.6 mmol/L)
Children :	10 – 11.5 mg / dL
Urine :	140 - 350 mg / 24 hrs

REAGENTS :

1.	Standard	10 mg / dL (2.5 mmol/L)
2.	Chromogen :	
	Methylthymol blue	0.2 mmol /L
	Hydroxy 8-quinoline	140 mmol /L
	Hydrochloric acid	200 mmol/L
3.	Buffer :	
	Ethanolamine	6 mol / L

STABILITY :

All reagents are stable up to the expiry date specified when stored at +15 to +25°C

PROCEDURE :

Rinse test tubes before use with working reagent if necessary.

Working reagent : Mix one volume of reagent 2 with one volume of reagent 3 before use .

Pipette into test tubes (FREE OF CALCIUM)

	Blank ml	Standard ml	Sample ml
Sample	-	-	0.02
Standard (R1)	-	0.02	-
Working reagent	1.0	1.0	1.0

Mix well, wait 5 min. at room temperature . Read the absorbances of the sample (A_{Sample}) and the standard (A_{Standard}) against blank, at 585 nm. (575 - 590) . The color is stable for at least 60 min. Linearity up to 20 mg / dL .

CALCULATION :

Calcium Concentration

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

QUALITY CONTROL :

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

REFERENCE :

Gindler M. King J.D. (1972) : Am. J. Clin. Path. 58, 376.

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+15 to +25 °C 50 Tests
In vitro diagnostic use

CAT. NO. CA 12 10

REAGENTS

R1 Standard	2ml
R2 Chro mogen	25ml
R3 Buffer	25ml

CONTACTS

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