

Reagent kit for quantitative estimation of Calcium in Serum.

DIAGNOSTICS SIGNIFICATION:

Calcium functions as an important factor in structure of bones and teeth, in neuromuscular activity and in clotting of blood. Elevated calcium values are associated with multiple myeloma, neoplasia of bone., hyperparathyroidism and conditions of rapid demineralization of bone. Lower calcium levels are associated with hypoparathyroidism, tetany and occasionally, with nephrosis or pancreatitis.

PRINCIPLE:

In an acidic medium, Calcium ion binds with ArsenazoIII gives colored complex. The colored complex formed is directly proportional to the calcium present when measured at 630 nm (600-650nm or with RED filter).



SPECIMEN COLLECTION:

Fresh, clear serum without hemolysis is necessary.

KIT PRESENTATION:

Pack	Calcium Reagent	Calcium Std. (10 mg/dl)	Yellow Sample Tips
25 Test	25 X 1 ml	1 X 1 ml	25 Nos.
50 Test	50 X 1 ml	1 X 1 ml	50 Nos.
2 X 50 ml	2 X 50 ml	1 X 1 ml	--
2 X 100 ml	2 X 100 ml	2 X 1 ml	--

PRECAUTION:

In case of glass wares to be used in Calcium assay they should be thoroughly decontaminated by soaking into 1N HCl overnight (8 to 10 hours) or alternatively, into 6N HCl for 4 to 8 hrs.

PREPARATION OF WORKING REAGENT:

Calcium Reagent is Ready-to-use.

REAGENT STORAGE AND STABILITY:

Calcium Reagent and Standard are stable at 2-8⁰C until the expiry date indicated on the label.

ASSAY PARAMETER:

Reaction : End point	Sample Volume : 10 µl
Wavelength : 630 nm (600-650)	Reagent Volume : 1.0 ml
Zero Setting : Reagent Blank	Standard Conc. : 10 mg/dl
Incub.Temp. : RT	Linearity : 20 mg/dl
Incub Time : 5 minutes	Unit : mg/dl

PROCEDURE:

Pipette into TT	Blank	Standard	Test
Calcium Reagent	1.0 ml	1.0 ml	1.0 ml
Calcium Std (10 mg/dl)	--	10 µl	--
Sample (Test)	--	--	10 µl

Mix and incubate at RT for 5 minutes. Read absorbance of Standard (S) and Test (T) after 5 minutes against Reagent Blank at 630 nm (600-650 nm or with RED filter).

STABILITY OF FINAL REACTION MIXTURE:

The color of the final reaction mixture is stable for 60 minutes when protected from Light and store at cold place.

CALCULATION:

Calcium concentration (mg/dl) = $Abs\ T \div Abs\ S \times 10$

NORMAL VALUES:

Serum Calcium : 8.8 to 10.5 mg/dl.

LINEARITY:

The procedure is linear up to 20 mg/dl. If values exceed this limit, dilute the sample suitably with 0.9% saline and repeat the assay. Apply dilution factor to obtain the test results.

REFERENCE:

1. Tietz NW (Ed) Textbook of Clinical Chemistry) WB Saunders 1986: 1350.
2. Young DS, et al, Clin Chem 1975:21:272DD.

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Expiry Date



In-Vitro Diagnostics Use



Storage



Mfg. Date



Batch Number



Catalogue Number



See Package Insert