



# Calcium

**Liquid Stable Reagent**  
**Colorimetric method by using Arsenazo III**  
**Store at Room temperature**

## PRINCIPLE

Arsenazo III reacts with calcium in a slightly acid medium to form blue-purple complex. The intensity of the color is proportional to the calcium concentration.

## REFERENCE VALUES

New born	7.5-14 mg/dl
Adult	8.5-10.5 mg/dl
Urine	100-400 mg/24h

These ranges are given for orientation, Each laboratory should establish its own normal ranges.

## SAMPLES

Serum, heparin plasma, Do not use sodium oxalate, EDTA or sodium florid as anticoagulant.

Urine diluted in distilled water 1/3 and acidified to pH 3-4 with HCl ( N/10 ),Calcium in sample is stable for 10 days at 2-8°C.

## REAGENTS

### R<sub>1</sub>:

Imidazol	100 mmol/l
Arsenazo III	230 µmol/l
Detergents	S.Q.

### R<sub>2</sub>:

Standard	10 mg/dl
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The reagent is ready -to-use and stable at room temperature until the expiration date stated on the label.

## PROCEDURE

Wavelength	650 nm ( 600 – 650 nm)
Temperature	Room Temperature
Cuvette	1 cm light path
Method	Endpoint - increasing

	Blank	Standard	Sample
Standard	-	20 µL	-
Sample	-	-	20 µL
Reagent	1ml	1ml	1 ml

Mix well and wait 2 minutes at room temperature. Read the optical density (O.D) of standard and sample against the blank.

The color is stable for 1 hour.

If the absorbance of working reagent is higher than 0.6 at 650nm the reagent can not be used.

## CALCULATION

$$\text{Ca (mg/dl)} = \frac{\text{O.D sample}}{\text{O.D standard}} \times \text{standard concentration}$$

## LINEARITY

Up to 18mg/dl

## QUALITY CONTROL

All control sera with Calcium values determined by this method may be employed

## NOTS

In the course of determination please use disposable plastic only, Chelating agents (EDTA) interfere with the reaction.

## SPECIFICATIO

Bilirubine 0.5g/l, lipid 7g/l, glucose 10g/l and ascorbic acid 0.5g/l don't interfere with the assay up to the given levels.

## PRESENTATION

4 X 60 ml      Cat No 1101      240 Test

## BIBLIOGRAPHY

- Textbook of Clinical Chemistry Edited bN.W. Tietz, p. 1342 W.B. Saunders Company, and 1986.
- Michalova, V., and Iikova, Anal Chim. Acta 53, 194-198, 1971.
- Bauer, Anal. Biochem. 110, 61-72, 1981.
- Documenting data on life and available upon request.
- Yong, D.S., Pestaner, L.S.and Gibberman, Clin. Chem. 21, No. 5, 1975.

## The following symbols are used on labels

IVD

**For in vitro diagnostic use**



**Use day (last day of the month)**



**Temperature limitation**

LOT

**Batch code**

REF

**Code**