

**Quantitative determination of Calcium
IVD**

ORDER INFORMATION

REF: CARZM 50	Cont.	50x1 ml
CARZ 100		2x50 ml

CLINICAL SIGNIFICANCE

Increased serum calcium may be observed in hyperparathyroidism, vitamin D intoxication, multiple myeloma and some neoplastic diseases of bone. Decreased serum calcium may be observed in hypoparathyroidism, vitamin D deficiency, steatorrhea, nephrosis, and nephritis.

PRINCIPLE

At a neutral pH, the Ca²⁺ forms with arsenazo III a complex, the color intensity of which is directly proportional to the concentration of calcium in the sample.

REAGENT COMPOSITION

Reagent I : Arsenazo III reagent
Calcium standard : 10 mg/dl

SAFETY PRECAUTIONS AND WARNINGS

1. Reagent is for "in vitro" diagnostic use only.
2. Reagent may be irritating to the skin. Avoid contact. Flush with water if contact occurs.
3. Reagent contains Sodium Azide as a preservative. In a dried form this may react with copper or lead plumbing to form explosive metal azides. Upon disposal, flush with large amounts of water to prevent azide build up.

SAMPLE COLLECTION AND PRESERVATION

Serum, heparinised plasma, 24 hr urine diluted 1:3 with distilled water (adjust pH 3-4 with 0.1N HCl).

REAGENT PREPARATION AND STORAGE

All reagents are ready to use.

REAGENT STABILITY

Up to expiry date when stored at room temperature.

LINEARITY

The method is linear to a concentration of 16 mg/dl

AUTOMATED PARAMETERS

Wavelength	650 nm
Cuvette	1 cm light path
Reaction Temperature	R.T.
Measurement	Against r
Reaction Type	End point
Sample/Reagent Ratio	1:40
Incubation	5 minutes
Blank Absorbance limit	0.80
Low Normal	8.8 mg/dl
High Normal	10.2 mg/dl
Linearity	16 mg/dl

ASSAY PROCEDURE

PIPETTE INTO TEST TUBES

BLANK	STD	SAMPLE
Sample -	-	25 µl
Standard -	25 µl	-
Reagent	1000 µl	1000 µl

Mix well, incubate at R.T. for 5 min. Measure final absorbance of the sample (Ac) and standard (As) against the reagent blank.

CALCULATION

Ac/As x C	=	mg/dl	Ca in SERUM
Ac/As X C X 3	=	mg/dl	Ca in URINE

QUALITY CONTROL

Accutestrol N - H

NOTE

CARZ 50 are specially treated monovials with 1ml pre-dispensed reagent. Just add 25 µl sample / std., Incubate at R. T. for 5 min. & aspirate. Use the same programme as above.

REFERENCE INTERVAL

Serum 8.8 - 10.2 mg/dl

The reference values are to be considered as indicative only. Every laboratory should establish its own normal range.

BIBLIOGRAPHY

Bishop, M.L.Dubeb-Von Laufen, J.L., Burtis, Carl Aa and Ashwood, Titz 110, 61.