

Quantitative determination of Calcium IVD

ORDER INFORMATION

REF:CAOC 100 Cont. 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

Calcium ions form a violet complex with O-cresolphthalein complexone in an alkaline medium.

REAGENT COMPOSITION

Reagent I : AMP Buffer reagent
Reagent II : OCPC Color 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 urine diluted 1:3.

REAGENT PREPARATION AND STORAGE

Mix equal volumes of solutions 1 and 2 to give enough reagent for the number of samples being run.

REAGENT STABILITY

6 hrs. at room temperature

LINEARITY

The method is linear to a concentration of 15 mg/dl

AUTOMATED PARAMETERS

Wavelength	570nm
Cuvette	1 cm
Reaction Temperature	R.T.
Measurement	Against r
Reaction Type	End point
Sample/Reagent Ratio	1:40
Incubation	5 minutes
Reagent Blank Abs limit	< 0.5
Low Normal	9 mg/dl
High Normal	11 mg/dl
Linearity	15 mg/dl

ASSAY PROCEDURE

PIPETTE INTO TEST TUBES

	BLANK	STD	SAMPLE
SAMPLE	-	-	25 µl
STANDARD	-	25 µl	-
REAGENT	1000 µl	1000 µl	1000 µl

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

CALCULATION

$Ac/As \times C = \text{mg/dl Calcium in SERUM}$
 $Ac/As \times C \times 3 = \text{mg/dl Calcium in URINE}$

QUALITY CONTROL

Accutestrol N - H

REFERENCE INTERVAL

SERUM : 9-11 mg/dl
24 h URINE : 50-400 mg/24h

BIBLIOGRAPHY

Faulker W.R, and Meites.S., Caly J.P. et. al giteman, YH. anal, Richterich.R, 59, 836.