

BHAT BIOSCAN™

Pack size. CA -50ml

CALCIUM-Colorimetric O-Cresolphthalein complexone method Cat. No. CA - 50

Principle:

At alkaline pH, calcium binds to solution, phosphorus reacts with molybdate to form phosphomolybdate complex. The change in absorbance is due to complex formation is measured at 340nm, which is directly proportional to the concentration of the phosphorus.

Reagent Composition:

1. Reagent- 1 (O-CPC reagent)
2. Reagent-2 (Buffer reagent)
3. Cleaning solution
4. Washing solution
5. Calcium standard 10 mg/dl

Reagent Preparation:

Mix Reagent-1 and 2 in the ratio of 1:1 and use for the assay.

Storage & Stability:

Store at 2-8° C, and keep away from light. Unopened reagent is stable until expiry date stated on the label.

Sample:

Unhemolysed serum or heparinised plasma can be used.

Procedure:

Let stand reagents and specimens at room temperature. All glasswares used should be soaked in 1N HCl for atleast 30min. and rinsed thoroughly with distilled water. Wash the Cuvette with cleaning solution and rinse twice with wash solution provided in the kit.

Tube	Blank	Standard	Test
Reagent	1000µl	1000 µl	1000 µl
Standard	-	20 µl	-
Sample	-	-	20 µl

Mix and Incubate @ room temp. for 5 min. Read the absorbance at 570 nm against reagent blank.

Calculations:

Calculate the result as follows:

$$\text{Calcium (mg/dl)} = \frac{A_{\text{sample}}}{A_{\text{standard}}} \times \text{Std.}$$

Expected Value:

Serum

Adult : 8.5-10.5 mg/dl

Children: 9.2-11.0 mg/dl

Each lab should optimize its own normal range.

Quality Control:

The assay linear up to 10mg/dl. Use always QC sera to analyze the performance of the assay.

Reference:

1. Giteman, HL, et al., Anal. Biochem.18: 533 (1967).