# Albumin

(BCG Dye Binding Method)

Code : 10002 (2x50 ml)

(For the Analyser/Colorimetric Estimation of Albumin in Serum / Plasma)

In VITRO USE Only.

## SUMMARY & EXPLANATION OF TEST :

Among the various methods available for the quantitative analysis of Proteins such as salt fractionation, electrophoresis, ultracentrifugation, etc Kjeldahl's digestion method is considered as a reference method. However, this method is time consuming and cumbersome.

Biuret reagent incorporate some modifications to ensure optimum performance & greater stability. The Protein standard use is standardized by kjeldahl's digestion method. For albumin estimation Bromocresol green (which has an affinity for albumin) is used. It is more selective, leading to better accuracy. Hence, ALBUMIN Kit becomes ideal for the quantitative analysis of Albumin.

## PRINCIPLE :

Albumin in a buffered medium binds with bromocresol green (BCG) and produce a green color whose absorbance is proportional to the Albumin concentration.

## REAGENTS :

1. Buffered Dye Reagent 2 x 50 ml
2. Standard 3 ml

The reagents are ready to use and usable upto the expiration date when stored at room temperature. Standard which is provided separately should be stored at 2-8$^{O}$C.

## SAMPLE :

Serum / E.D.T.A. Plasma. Serum should be separated as soon as possible after collection. Grossly hemolyzed / turbid sample should not be used.

## EXPECTED RANGE :

Albumin : 3.7 to 5.3 gm%

## LINEARITY :

Albumin upto - 8.0 gm%

## INSTRUCTIONS :

1. If standard (2) shows any visible bacterial or fungal contamination, consider it unsuitable for use and discard it.
2. The reagent and sample volumes may be altered proportionately to accommodate different spectrophotometer requirements.

## DIRECTIONS FOR USE ON ANALYSERS:

### Albumin Assay

| | | |
|---|---|---|
| Reaction Type | : | End point with std. |
| Wave Length | : | 630 nm (Red filter) |
| Incubation Temp | : | Room Temperature |
| Incubation Time | : | - |
| Standard | : | Value stamped on the vial |
| Linearity | : | 8 gm% |
| Unit | : | gm% |

## PROCEDURE:

### I. Albumin Assay :

Pipette into clean dry test tubes labelled Blank (B), Standard (S), & Test (T) :

| | (B) | (S) | (T) |
|---|---|---|---|
| Buffered Dye Reagent (1) | 1.0ml | 1.0ml | 1.0ml |
| Distilled water | 2.0ml | 2.0ml | 2.0ml |
| Standard (2) | - | 0.01ml | - |
| Serum/plasma | - | - | 0.01ml |

Mix well & measure immediately the absorbance of Standard (S) and Test (T) against Blank (B) on a photocolorimeter with a red filter or on a spectrometer at 630nm (Hg 623nm).

## CALCULATIONS :

$$\text{Albumin in gm\%} = \frac{\text{A of (T)}}{\text{A of (S)}} \times \text{Std. Conc.}$$

## NOTES :

★ Due to variations in inter - laboratory assay conditions, instruments and demography, it is recommended that each laboratory should establish its own normal range. To ensure adequate quality control, each run should include a normal and abnormal assayed controls. The assigned value of the control must be confirmed by this methodology.

★ Final diagnosis should be based on a co-relation of test results with other clinical observations / Diagnostic tools.

## BIBLIOGRAPHY:


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3. Flack, C.P. and woollen J.W. Clin Chem, 30, 559 (1984).



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