Albumin Test Kit

REF	Pack Size	Reagent 1	Reagent 2 (Std)
ALBLMS01	2X50 ML	2×50 ml	1×2 ml

INTENDED USE
Albumin kit is used for quantitative estimation of albumin concentration in human serum or plasma.

CLINICAL SIGNIFICANCE
Observation of serum albumin level is useful as an Aid in Diagnosing disease states of the liver and kidneys.
Moderate to large changes in the concentration of albumin have significant on the relative amounts of the bound and free concentration of ligands it carries; because free ligands are those that interact with tissue receptor sides and that can be excreted, albumin levels have important influences on the metabolism of endogenous substances such as calcium bilirubin and fatty acids and on the effects of drugs and hormones.
Hypoalbuminemia is very common in many illnesses and results in most instances from one or more of the following factors
1)Impaired synthesis 2) increased catabolism 3) reduce absorption of amino acids 4) altered distributions which may sequester large amounts of albumin in an extra vascular compartment 5) protein lost by way of urine or feces.

METHOD
End point method, Single reagent chemistry, Bromocresol green method (BCG Method)

TEST PRINCIPLE
Albumin forms complex with Bromocresol green in Acidic medium. The Intensity of the color solution formed after the reaction is directly proportional to the concentration of albumin present in respective samples.

KIT CONTENTS/COMPONENETS
Reagent 1: BCG Reagent & Reagent 2: Standard 4 gm/dl

MATERIAL REQUIRED BUT NOT PROVIDED
Laboratory instrumentation, spectrophotometer UV/VIS with thermostatic cuvette holder or clinical chemistry analyzer: semi-automated, calibrated micropipettes, glass or high-quality polystyrene cuvettes, test tubes/rack, heating bath, controls, saline.

SAFETY PRECAUTIONS AND WARNINGS
1.For in-vitro diagnostics use only.
2.Do not pipette by mouth. Avoid contact with skin and eyes. If spilt thoroughly wash affected area with water.
3.Do not use the reagent after the expiration date printed on the kit.

REAGENT PREPARATION, STORAGE AND STABILITY
BCG Reagent 1 & Standard is ready to use & are stable up to expiry date mentioned on the pack. The albumin standard is stored at 2-8ºC.
Stability since first opening of vials: within 60 days at 2-8ºC.

REAGENT DETERIORATION
1.Discard the reagent if absorbance exceeds 0.30 against distilled water.
2.Keep the Standard vial plugged after use, in order to avoid deterioration.

SPECIMEN
Serum (preferred) plasma (heparinase or EDTA). Venostasis should be avoided in specimen collection because hemoconcentration increases the concentration of Albumin and other plasma proteins.

PROGRAM

Reaction Mode	End point
Wavelength	578 nm
Light Path	10 mm
Blanking	Reagent blank
Reagent Volume	1000 µl
Standard Volume	10 µl
Sample Volume	10 µl
Incubation temp.	5 min. at RT
Standard concentration	4 gm/dl
Linearity	6 gm/dl

PROCEDURE

Addition Sequence	Blank	Standard	Sample
Reagent	1000 µl	1000 µl	1000 µl
Standard	----	10 µl	----
Sample	----	----	10 µl

Mix well & incubate for 5 minutes at Room temperature read absorbance of sample and absorbance of standard against reagent blank.

CALCULATION
Concentration (C) of Albumin in the sample.

$$C = \frac{\text{Abs of sample}}{\text{Abs of std.}} \times 4 \text{ gm/dl (Conc. of standard)}$$

NORMAL VALUES
Neonates : 3.8 – 4.2 gm/dl
Adult : 3.8 – 4.4 gm/dl

LIMITATIONS
If the value exceeds 6 gm / dL, dilute the sample with 0.9% saline solution rerun and result multiplied by dilution factor.

QUALITY CONTROL AND CALIBRATION
It is recommended to perform internal quality control with assayed normal and assayed abnormal, to confirm the validity of the test and assure the accuracy of patient result. Using the recommended calibrator or the Standard included, calibrate the assay.
1.When using a new reagent or lot
2.When QC values are out of range

WASTE DISPOSAL
This Product is made to be used in professional laboratories.

HIGHLIGHT
1.Storage condition mentioned on the kit is to be used.
2.Do not freeze or expose the reagents to higher temperature as it may affect the performance of the kit.
3.Before testing bring the reagents to the RT.
4.Avoid reagents contamination.
5.Every time use new pipette-tips for pipetting out the reagents.
6.These Reagent kits meant for laboratory/professional use only, not for Drug use.

REFERENCES
Tietz N.W., ed. Clinical Guide to laboratory Tests, 3rd ed.Philadelphia, Pa: W.B. Saunders,610 – 611.
Lords Data File.

REF	Catalog No.	Σ	Contain Sufficient for test
LOT	Batch No.		Instruction for use
	Manufacturing Date	IVD	*In-vitro* Diagnostics
	Expiry Date		Storage temperature
	Manufacturer		

IFU/ALB/01 Rev.: 01; Rev Dated.: 22/07/2024

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