Swemed DIAGNOSTICS

ALBUMIN KIT

METHOD : Bromo cresol green (BCG) dye

PRINCIPLE:

Serum Albumin binds selectively to the dye bromocresol green at pH 4.2. The increase in absorbance of the resulting Albumin-dye complex, read at 630 nm, is proportional to the Albumin concentration.

REAGENTS:

1. Albumin Reagent : Ready – To – Use
2. Albumin Standard : Ready – To – Use

STORAGE AND STABILITY:

Avoid Contamination of Ready-To-Use Reagents. Always use fresh pipette tips. Keep always the caps tightly closed.

Store the above Albumin Reagent at 15^0-25^0 C and Albumin Standard at 2^0-8^0 C. Reagents are stable upto the expiry dates mentioned on the label.

WARNING AND PRECAUTIONS:

1. For in-vitro diagnostic use only. Handle in accordance with good laboratory procedures which dictate avoiding ingestion and eye or skin contact. The reagent is an acid solution. Flush with water when contact occurs.
2. Specimens should be considered infectious and handled appropriately.

SPECIMEN COLLECTION:

1. Test specimens should be serum and free from hemolysis.
2. Avoid excessive hemolysis since every 100 mg/dl of Haemoglobin corresponds to about 100 mg/dl of Albumin.
3. Albumin in serum is stable for one week at Room Temperature (15-30^0 C) and approximately one month when stored in the refrigerator (2^0 – 8^0C) and protected against evaporation.

PROCEDURE LIMITATIONS:

1. The dye-binding properties of Albumin, other than human, differ among species.
2. Samples with values above 8.0 g/dl should be diluted with 0.9% saline 1:1 and re-run, and results multiplied by 2. Samples with results below 0.5 g/dl should be done electrophoretically.
3. Severely lipemic serum samples should be run with a serum blank.

a. Add 0.01 ml (10 µl) sample to 1.0 ml distilled water and read absorbance against distilled water at 630 nm.

b. Subtract the serum blank absorbance from the test absorbance and use the corrected absorbance in the calculations.

ASSAY PARAMETERS:

METHOD	: End point
REACATION SLOPE	: Increasing
WAVE LENGTH	: 630 nm
TEMPERATURE	: 37^0 C
BLANK	: Reagent blank
REAGENT VOLUME	: 1000 µL
SAMPLE VOLUME	: 10 µl
REACTION TIME	: 5 min
STD CONCENTRATION	: 4 g/dl.
LINEARITY	: 8 g/dl
UNITS	: g/dl.

MANUAL ASSAY:

Pipette into cuvettes	Macro (µl)	Semi-Micro (µl)
Reagent	1000	500
Sample	10	5
Mix & incubate for 5 minutes at RT and read the absorbance of all cuvettes at 630 nm, within 60 mins.		

CALCULATIONS:

$$\frac{\text{Abs. Of Sample}}{\text{Abs. Of Standard}} \times \text{Concentration of Standard} = \text{Albumin g/dl}$$

EXPECTED VALUES : 3.5 – 5.5 g/dl

LINEARITY

This kit is linear upto : 8.0 g/dl

REFERENCES:

1. Tietz, N. Fundamentals of clinical chemistry, Philadelphia, W.B. Saunders, pp 335-337 (1976).
2. Doumas, B., Watson, W., Clin. Chim. ACTA 31, 87 (1971).
3. Webster, S., Clin. ACTA 53, 109 (1974).

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