ESTROM Total Protein - SLR (Biuret Method)

ANGSTROM BIOTECH PVT. LTD

This kit is for in-vitro use to measure the concentration of Total Protein in serum and/or plasma.

PRINCIPLE:
The blue violet coloured complex is formed in alkaline medium when peptide bond of protein reacts with copper in the biuret reagent. The intensity of the colour formed is proportional to the proteins concentration in serum and/or plasma

PROTEIN + CU++ $\xrightarrow{\text{Alkaline pH}}$ BLUE – VIOLET COMPLEX

CLINICAL SIGNIFICANCE:
There can be change in concentration of total protein can be observed due to one or many fractions of protein. Low level of total protein is usually associated with renal disease, malnutrition, albuminuria and terminal liver failure. High levels are seen in conditions like dehydration, multiple myeloma, chronic liver diseases and chronic infections.

SPECIMEN COLLECTION AND PRESERVATION:
It is preferred to use fresh, clear, unhemolysed serum.
Serum is stable for four hours at room temperature and for two days when stored at 2°C - 8°C.
Plasma collected with EDTA or Oxalate may also be used.

REAGENT:
The reagent may be stored at Room Temperature.

	No of Bottles	
	2 x 50 ml	1x100 ml
Reagent 1 (Total Protein Reagent)	2	1
Standard (6 g/dl) (store at 2-8^0 C)	1	1

Provided separately

PRECAUTION:
Estrom Total Protein reagent is for In Vitro diagnostic use only.

REAGENT RECONSTITUTION:
Ready to use.

REAGENT STORAGE AND STABILITY:
The reagent is stable at room temperature up to the expiry date stated on the label.

The Total Protein standard may be stored at 2-8^{0}C once the kit is opened.

GENERAL SYSTEM PARAMETERS:

Method	:	Endpoint
Reaction	:	Increasing
Wavelength	:	540 nm (530 - 570 nm)
Temperature	:	30°C
Sample volume	:	20 µl
Reagent volume	:	1000 µl
Incubation	:	5 minutes
Standard concentration	:	6 g/dL
Unit	:	g/dL
Normal Range	:	6.0 – 8.5 g/dL
Path length	:	1 cm
Linearity	:	Up to 10 gms/dl

PROCEDURE:

Bring reagent and sample to room temperature prior to use:

Pipette into test tubes	Blank	Std.	Sample
Reagent 1	1000 µl	1000 µl	1000 µl
Sample	-	-	20 µl
Standard	-	20 µl	-
Mix and incubate for 5 minutes at 30°C Read Absorbance of sample and standard/calibrator against reagent blank at 540 (530 – 570 nm)			

The reagent and standard/sample volumes may be doubled in case of instrument with larger cuvette capacity.

The colour of the reaction mixture is stable for 30 minutes.

LINEARITY:
This method is linear for Total Protein concentration up to 10 gms/dl. For sample values exceeding the linearity limit, dilute the sample suitably with normal saline and repeat the assay. Apply proper dilution factor while calculation.

CALCULATION:

$$\text{Total Protein concentration (gms/dl)} = \frac{\text{Abs. Test}}{\text{Abs. std}} \times 6$$

REFERENCE VALUES:
Total Protein = 6.0 – 8.5 gms/dl

BIBLIOGRAPHY:

- Webstr. D. Clin. Chem. 23; 663 (1977).
- ENRY, R.J., CANNON. D.C. and WINKELMAN J.W., Clinical Chemistry, Principals and Techniques, Harper and Row, 2nd Edition, (1974).

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	Attention,see instructions for use		Consult Instructions For Use
IVD	For in vitro diagnostic use only	REF	Catalog #
	Store at RT	LOT	Lot Number
	Do not use if package is damaged		Date of Manufacturing
	Manufacturer		Use by