TOTAL PROTEIN (BR-160/ BR-120) Colorimetric Test – Biuret Method

IVD

PRODUCT
CODE CS015

INTENDED USE
For the quantitative determination of Total Protein in serum or plasma.

CLINICAL SIGNIFICANCE
Proteins form the major portion of dissolved substances in the plasma. They form the basic structural components of the body. They constitute the enzymes present in our body & also act as secondary source of energy. The other functions include distribution of water, buffering, transport of various components, defense & coagulation of blood in our body.
Increased levels are found in dehydration & myeloma.
Decreased levels are found in liver disorders, Nephrotic syndrome, malnutrition & protein due to haemorrhage.

PRINCIPLE
Protein in serum or plasma forms a blue/violet complex when mixed with copper ions in alkaline solution (Biuret reaction) each copper ion binding with 5 or 6 peptide bonds. Tartrate is added as a stabilizer and iodide is used to prevent auto reduction of the alkaline copper complex. The absorbance of this complex at 546 nm is proportional to the protein concentration.

REAGENT
COMPOSITION TOTAL

PROTEIN (SL) Sodium	200 mmol/L
hydroxide	32 mmol/L
Potassium sodium tartrate	18 mmol/L
Copper Sulphate	30 mmol/L
Potassium Iodide	

REAGENT
PREPARATION Reagent is ready for use.

REAGENT STORAGE AND STABILITY
The color reagent, stable up to the expiry date when stored at 2-8° C. Contamination after opening must be avoided.

SPECIMEN
Serum, heparinized or EDTA plasma, Serum is stable for 1 month at 2-8° C or 1 week at 15 - 25° C.

PRECAUTION
To avoid contamination, use clean laboratory wares. Avoid direct exposure of reagent to light.

PRUCEDURE
APPLICATION ON AUTO BIOCHEMISTRY ANALYZERS

BR-160 AUTO BIOCHEMISTRY ANALYZER

TEST NAME	TP			SAMPLE VOLUME	5	
FULL NAME	TOTAL PROTEIN					
					R1	R2
	PRI.	SEC.		REAGENT VOLUME	250	NONE
WAVE LENGTH	546	NONE				
		START	END			
ASSAY /POINT	1 POINT END	1	25			
DECIMAL PLACE	3					
UNIT	g/dl					
	LOW	HIGH				
LINEARITY RANGE	0	12				

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BR-120 AUTO BIOCHEMISTRY ANALYZER						
TEST NAME	TP			SAMPLE VOLUME	5	
FULL NAME	TOTAL PROTEIN					
				REAGENT VOLUME	R1	R2
	PRI.	SEC.			250	NONE
WAVE LENGTH	546	NONE				
		START	END			
ASSAY /POINT	1 POINT END	6	39			
DECIMAL PLACE	3					
UNIT	g/dl					
	LOW	HIGH				
LINEARITY RANGE	0	12				

Measuring range:

From the detection limit 0.007g/dl to linearity limit of 12g/dL. Sample with a higher concentration should be diluted 1:1 with physiological saline (0.9%). Repeat the estimation and multiply the result by 2.

NORMAL RANGE

New born	4.6 – 7.0 g/dL
Children/Adults	6.6-8.7 g/dL

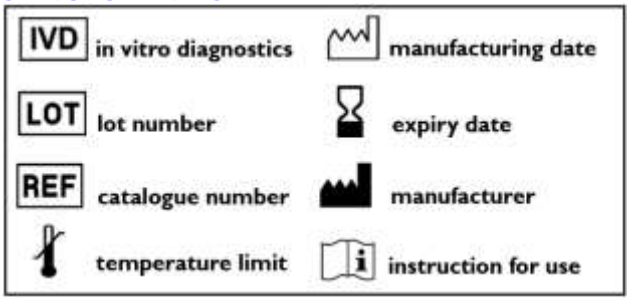
QUALITY CONTROL

All control sera with Protein values estimated by this method may be used.

NOTES

1- The color reagent contains sodium hydroxide which is an irritant. In case of contact with skin or mucous membrane wash immediately with water.
2- The standard contains sodium azide as a preservative. Do not swallow. Avoid contact with skin and mucous membranes.
3- Slight sediment may develop as the reagent ages. This may be removed by filtration or centrifugation.
4- Sample blank is needed for Haemolytic and lipemic sera. using the same procedure, pipette 0.02 ml serum into 1 mL of 0.9% saline, read absorbance against saline and subtract from As.

SYMBOL ON LABELS



BIBILOGRAPHY

1- Koller A. Total serum protein. Kaplan A et al. Clin Chem the C.V. Mosby Co. St Louis. Toronto. Princeton 1984; 1316-1324 and 418
2- Young DS. Effects of disease on Clinical Lab. Tests, 4th ed AACC 2001. Urtis
3- A et al. Tietz Textbook of Clinical Chemistry, 3rd ed AACC 1999.
4- Tietz N W et al. Clinical Guide to Laboratory Tests, 3rd ed AACC 1995.
-1356.

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