



T.Protein

Stable Liquid Reagent
Biuret method

PRINCIPLE

Serum proteins form a violet colored complex in the presence of copper salt in alkaline solution (Biuret reaction), the intensity of the color is proportional to the proteins concentration.

REFERENCE VALUES

Newborn	5.2 – 9.1	g/dl
Children	5.4 – 8.7	g/dl
Adults	6.7 – 8.7	g/dl

These ranges are given for orientation only, each laboratory should establish its own normal ranges.

SAMPLES

Serum, heparinized or EDTA plasma. Free of haemolysis Total protein in serum is stable up to 1 month at 2-8°C.

REAGENTS

R₁ : Biuret solution :

Copper sulfate	6 mmol/l
Potassium sodium tartarate	21 mmol/l
Sodium hydroxide	3.8 mol/l
Potassium iodide	30 mmol/l

R₂ : Standard 6 g/dl.

PREPARATION

The reagent is ready for use and stable up to the date of expiration as specified.

PROCEDURE

Wavelength	546 nm (530 – 570 nm)
Temperature	25°C
Cuvette	1 cm light path
Method	Endpoint - increasing

If the absorbance of the working reagent is higher than 0.1 at 546 nm the reagent can not be used.

	Blank	Standard	Sample
Sample	-	-	10 µ l
Standard	-	10 µ l	-
Reagent	1ml	1ml	1 ml

Mix and after 10 minutes incubation read the optical density (O.D) against the blank, the final color is stable for at least 1 hour.

CALCULATION

$$(\text{mg/dl}) = \frac{\text{O.D Sample}}{\text{O.D Standard}} \times \text{Standard concentration}$$

LINEARITY

Up to 13 g/dl .

SENSITIVITY

It is recommended that each laboratory establishes its own range of sensitivity as this is limited by the sensitivity of the spectrophotometer used. Under manual conditions however, a change of 0.001 abs is equivalent to 0.18g/l Protein concentration at 546nm.

SPECIFICATION

Bilirubin 0.5g/l, lipid 10g/l, glucose 10g/l and ascorbic acid 0. 5g/l do not interfere with the assay up to the given levels

NOTES

- Solution 1 contain sodium hydroxide which is caustic.
- Solution 2 contain sodium azid, Avoid ingestion or contact with skin.

PRESENTATION

4 X 60 ml Cat No 2801 240 tests

BIBLIOGRAPHY

Peters.T.J. Clin. Chem, 14, 1147 (1968).
Henry.R.J, Anal. Chem, 92, 1491 (1957).

The following symbols are used on labels



For in vitro diagnostic use



Use day (last day of the month)



Temperature limitation



Batch code



Code