PROTEIN in CSF

Folin-Lowry Colorimetric Method 100 Tests

PRINCIPLE :

Two reactions are involved: (a) an initial interaction of protein and Cu^{2+} in alkali (related to biuret reaction); (b) a reduction of the phosphotungstic and phosphomolybdic acids to molybdenum blue and tungsten blue both by the Cu-protein complex and by the tyrosine and tryptophan of the protein. The latter two give color in the absence of Cu^{2+}, but the rest of the protein gives no color without Cu^{2+}. About 75% of the color is dependent on the Cu^{2+}. The maximum absorption of the colored products is at 750 nm.

SAMPLE :

CSF

Normal Values :

15 - 45 mg / dl

REAGENTS :

1-	**Standard**	50 mg / dL
2-	**Alkaline Copper - Tartrate**	
	Sodium Carbonate	200 mmol / L
	Sodium Tartrate	20 mmol / L
	Sodium Hydroxide	800 mmol / L
	Copper Sulphate	6 mmol / L
3-	**Folin and Ciocalteu phenol Reagent**	

STABILITY :

The reagents are stable up to the expiry date specified when stored at +4 to +8 °C away from light .

PROCEDURE:

	Blank (ml)	Standard (ml)	Sample (ml)
D. Water	0.05	-	-
Standard	-	0.05	-
Sample	-	-	0.05
Reagent 2	1.0	1.0	1.0
Mix well, let Stand 15 min. add rapidly:			
Reagent 3	0.05	0.05	0.05

Mix well immediately. Incubate for 10 min. at 37°C. Read absorbances at 700 (650 – 750 nm) for sample (A_{Sample}) and standard ($A_{standard}$) against reagent blank. Color stable for Several hours.

CALCULATION :

$$\text{Protein concentration (mg/dL)} = \frac{A_{Sample}}{A_{Standard}} \times 50$$

REFERENCE :

Daughaday WH, Lowry OH, Rosebrough NJ, Fields Ws. J, Lab. Clin. Med. 39, 663, (1952).

BIODIAGNOSTIC
DIAGNOSTIC AND RESEARCH REAGENTS

PROTEIN in CSF

Folin – Lowry Colorimetric Method
+4 ºC **100 Tests**
In vitro diagnostic use

CAT. NO. **TP 20 21**

REAGENTS

R1	**Standard**	**2**	**ml**
R2	**Alkaline reagent**	**100**	**ml**
R3	**Phenol reagent**	**5**	**ml**

CONTACTS

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