Folin's Reagent

Product Name	Product Code	Kit Packing
Folin's Reagent	ML059-125ML	125 ml
	ML059-250ML	250 ml

Introduction:
Folin's Reagent is formulated for rapid and accurate quantitative estimation of protein samples by following Lowry's method which utilizes phenol reagent of Folin and Ciocalteau. This reagent is conveniently supplied as ready-to-use form and no dilution is required while performing the assay.

Description:
The Lowry's method utilizes phenol reagent of Folin and Ciocalteau. This is essentially phosphotungstic phosphomolybdic acid which can be reduced by phenols and many other substances with phenolic rings to 'molybdenum blue'. Proteins reduce phenol reagent, which may be used therefore for their determination. However, the amount of colour varies greatly with different proteins because it is entirely proportional to their content of tyrosine and tryptophan, other amino acids having little effect. Pretreatment of proteins with alkali and a trace of copper salt greatly increases the colour that is absorbed maximally at 750 nm.

Application:
Folin's Reagent is mainly used for the quantitative estimation of protein samples by the Lowry method.

Composition:
Folin's Reagent consists of Sodium tungstate, Sodium molybdate, Lithium sulphate, Phosphoric acid and concentrated Hydrochloric acid.

Properties:

Appearance	:	Yellow colored solution
Clarity	:	Clear and free of particles
Suitability test	:	This solution has been tested and is suitable for use in quantitative estimation of protein samples by Lowry's method

Storage conditions:
Folin's Reagent has to be stored at 15-25 °C. Under recommended condition, the reagent is stable for 12 months.

Quality control:
Folin's Reagent is tested for quantitative estimation of unknown protein samples.

ISO 9001-2015 CERTIFIED WHO GMP CERTIFIED ISO 13485-2016 CERTIFIED

Registered Office
HiMedia Laboratories Pvt Ltd.
Plot No. C-40, Road No. 21Y, MIDC, Wagle Industrial Area,
Thane, (West) 400604, Maharashtra, INDIA.
Customer Care No.: 00-91-22-6116 9797
Tel : 00-91-22-6147 1919, 6903 4800

Fax : 6147 1920
Web : www.himedialabs.com
Email : info@himedialabs.com
mb@himedialabs.com

Estimation of unknown protein using standard curve (with BSA)

1. Take ten tubes and label them as Blank and 1 to 9.
2. Make dilutions of Protein (BSA) standards with concentrations of 200, 160, 120, 80, 40, 20, 10 µg/200 ul by transferring respective amount of BSA from the standard protein solution (1 mg/ml) and adjusting it to a total volume of 200 µl by adding distilled water as mentioned in the following table.
3. Add 3 ml of Alkaline Copper reagent to each test tube including the Blank and Unknown tubes. Mix well.
4. Keep at room temperature for 10 minutes.
5. Add 0.5 ml of 1N Folin's Reagent to each test tube. Vortex the tubes and keep in Boiling Water Bath for 10 minutes
6. Switch on the Spectrophotometer, select the wavelength at 750 nm and let it warm before taking the absorbance (OD). First take the OD of Blank and make it zero
7. Remove Blank tube and take the OD of all the tubes and record it. Wash the cuvette after taking OD of each sample.

Tube No.	**Blank**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Conc. of BSA (µg)	0.0	10	20	40	80	120	160	200	Test sample 1	Test Sample 2
Amt of Stock (µl)	0.0	10	20	40	80	120	160	200	200 µl	200 µl
Amt of diluent (µl)	200	190	180	160	120	80	40	0.0		
Alkaline Copper Reagent	3	3	3	3	3	3	3	3	3	3
Keep at Room temperature for 10 minutes										
Amt of Folin's Reagent (ml)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Vortex and keep in Boiling Water Bath for 10 minutes										
Absorbance at 750 nm										

8. Plot a Standard Curve of absorbance at 750 nm on "Y" axis versus concentration of protein µg/200 µl on "X" axis.

9. Record the value "x" of Unknown from graph corresponding to the optical density reading of the test sample.

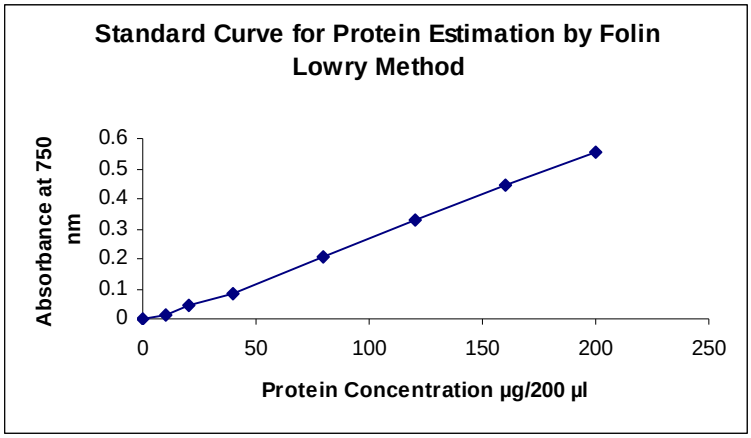


Fig: Standard curve for protein estimation by Lowry's method

Protein concentration can be calculated using following formula:

$$\text{Protein Concentration in Unknown Sample} = \frac{\text{Concentration of Unknown in "µg"}}{\text{Volume of sample in "µl"}} \times 1000\ \mu g/ml$$

Warning and Precautions

Not for Medicinal Use. Read the SDS carefully before beginning the protocol. Wear protective gloves/protective clothing/eye protection/face protection. Follow good clinical laboratory practices while handling clinical samples. Standard precautions should be followed as per established guidelines. Safety guidelines may be referred in safety data sheets of the product.

Performance and Evaluation

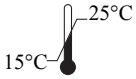
Performance of the solution is expected when the solution is stored at recommended temperature and within the expiry period.

Safety Information

The Folin's Reagent is for laboratory use only, not for drug, household or other uses. Take appropriate laboratory safety measures and wear gloves and safety goggles when handling. Not compatible with disinfecting agents containing bleach. Please refer the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

Technical Assistance:

At HiMedia we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance, mail at mb@himedialabs.com.



Storage temperature

Do not use if package is damaged

HiMedia Laboratories Private Limited,
Reg. Off: Plot No. C-40, Road No. 21Y,
MIDC, Wagle Industrial Area, Thane,
(West) 400604, Maharashtra, INDIA.
Web: www.himedialabs.com

01/2025

PIML059_0/0122 ML059-01