

Lowry Protein Assay

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Abstract

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Guidelines

Materials:

1. Reagent "A" - 2.0% Na_2CO_3 in 0.1 N NaOH
2. Reagent "B" - 0.5% $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ in 1.0% Na citrate
3. Reagent "C" - 50.0 mL reagent "A" + 1.0 mL reagent "B"
4. Reagent "D" - Folin-Phenol Reagent (2 N Solution, Folin/Ciocalteu), dilute 1:1 with d- H_2O before using

Notes:

It may be possible to reduce the initial volume of each assay to 0.5 mL and thus reduce the amount of subsequent reagents used by 50%. Use the same amounts of BSA for the protein standard curve.

Protocol

Step 1.

Set up a standard curve of 0, 10, 25, 50, 100, 150 and 200 μg of BSA in 10-15 ml tubes, 1.0 mL volume per sample.

Step 2.

Set up tubes (10-15 mL) of the unknown protein sample(s) to determine their concentration, the final volume per sample is to be 1.0 mL.

NOTES

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May need to dilute the sample(s) so that some reactions are in the concentration range of the standard curve values.

Step 3.

Add 5.0 mL of reagent "C" to each tube, mix immediately.

Step 4.

Let the samples sit for 10 min at room temperature.

DURATION

00:10:00

Step 5.

Add 0.5 mL of reagent “D” to each tube, mix immediately.

Step 6.

Let the samples sit for 30 min at room temperature.

 DURATION

00:30:00

Step 7.

Read absorbance at 600 nm. Record values, plot standard curve and determine sample concentration(s).