To Study Some Simple Tests Of Proteins

Requirements

Egg albumin dispersion, gelatin dispersion. Millon's reagent and Ninhydrin reagent.

Procedure

1. Biuret Test

To the dispersion of the substance to be tested (say 5% solution of egg albumin) add about 2 ml of NaOH solution. Now add 4-5 drops of 1% $CuS0_4$ solution. Warm the mixture for about five minutes.
Bluish violet colouration indicates the presence of protein.

2. Xanthoproteic Test

Take about 2 ml of egg albumin dispersion in a test-tube and add a few drops of cone. HNOa and heat.
A yellow colouration indicates the presence of proteins.

3. Ninhydrin Test

Take about 2 ml of egg albumin dispersion in a test-tube and add 3-4 drops of Ninhydrin solution. Boil the contents. Intense blue colouration confirms the presence of proteins.
Ninhydrin Solution is prepared by dissolving 0.1 g of ninhydrin in about 100 ml of distilled water. This solution is unstable and can be kept only for two days.

4. Millon's Test

This test is given by proteins containing phenolic amino acids. Gelatin does not give this test.

To 1-2 ml of egg albumin dispersion add 2 drops of Millon's reagent.

White ppt. which changes to brick red on boiling, confirms the presence of proteins.
Millon's Reagent is prepared by dissolving 5 g each of $HgNO_3$ and $Hg(N0_3)_2$ in 100 ml of dil. $HN0_3$.