

To Prepare Colloidal Solution (Or Sol) Of Egg Albumin

Theory

Egg albumin which is obtained from eggs forms lyophilic sol with cold water. The sol is quite stable and is not affected by the presence of traces of impurities.

Apparatus

Beakers (250 ml and 50 ml), glass rod, funnel, filter-paper, pestle and mortar, tripod stand, wire-gauze and burner.

Materials Required

Soluble starch (500 mg) and distilled water.

Procedure

1. Break the outer shell of the egg by striking it with a glass rod and collect its colourless liquid along with yellow yolk. Decant the colourless liquid into another beaker. This colourless liquid is known as egg albumin.
2. Prepare 100 ml of 5% (w/v) solution of sodium chloride in a 250 ml beaker. To this solution add egg albumin in small portions with constant stirring. This process should take 15-20 minutes.
3. Filter the contents of the beaker through a filter paper, fixed in a funnel, and collect the filtrate. Label this filtrate as 'egg-albumin sol'.

Precautions

1. The apparatus used for preparing the sol should be absolutely clean.
2. Distilled water should be used for preparing the sol.
3. Egg albumin sol is prepared at room temperature because in hot solution the precipitation of egg albumin takes place.
4. The yellow yolk should be separated completely from the egg albumin before using the latter in the experiment.
5. Addition of egg albumin should be done very slowly and with constant stirring so as to disperse the colloidal particles well in solution.