



Estimation of carbohydrate by Anthrone Method.

The anthrone reaction is the basis of a rapid and convenient method for the determination of carbohydrates, either free or present in polysaccharides.

Principle:

Carbohydrates are dehydrated by concentrated H_2SO_4 to form furfural. Furfural condenses with anthrone to form a blue-green colored complex solution shows an absorption maximum at 620nm, which is measured colorimetrically. note that some carbohydrates may give other colors.

The extinction depends on the compound investigated, but is constant for a particular molecule.

Materials:

1. Anthrone reagent (0.2% in conc. H_2SO_4).
2. Glucose (10mg/100ml).

Procedure:

1. Pipette out into a series of test tubes different volumes of glucose solution and make up the volume to 1ml with water.
2. Add 4ml of anthrone reagent to each tube.
3. mix well.
4. Cover the tubes with marbles on top to prevent loss of water by evaporation.
5. Keep the tubes in a boiling water bath for 10 minutes.
6. cool to room temperature.
7. Measure the optical density at 620 nm using a blank tube containing 1ml water and 4ml reagent.
8. Draw the standard curve and determine the concentration of unknown glucose solution

Name:

No.

Experiment 4:

Results Sheet

