

Experiment no. 7: Starch test of milk

Introduction:

Starch is cheaply available in various forms such as wheat flour, corn flour and commercially manufactured starch. It is sometimes added in the milk by adulterators to raise the SNF. Milk contains relatively large amount of fat. Addition of carbohydrate to milk increases its solid content. There by reducing the amount of fat present in the milk. Starch is one such component that is added to adulterate milk. The test to detect starch in milk uses iodine solution, addition of which turns the milk solution to blue black color due to the formation of starch –Iodo complex, in the presence of starch.

Reagent(s) required:

1. Potassium iodide
2. Iodine crystal

Reagent(s) preparation:

Iodine solution (1%): Dissolve 2.5 g potassium iodide in 100 ml water, add to it 1 g pure iodine crystal, shake well to give a clear solution.

Procedure:

1. Take 3 mL sample in a test tube.
2. After boiling it thoroughly, cool it to room temperature.
3. Add 1 drop of 1% iodine solution.

Observation:

Appearance of blue colour indicates the presence of starch in the milk sample whereas a control milk sample develops slight