

## Qualitative identification of starch (iodine), glucose (Benedict's) and protein (biuret)

### Introduction

The identification of the different food types can be carried out using different chemical tests. A positive result for each food type is determined by a colour change. In this activity you will carry out the chemical tests for starch, glucose and protein.

### Apparatus

3 × test tubes  
 3 × dropping pipettes  
 3 × 5 cm<sup>3</sup> syringe  
 iodine solution with dropping pipette  
 Benedict's reagent with dropping pipette  
 biuret reagent with dropping pipette  
 starch solution  
 glucose solution  
 albumen (protein) solution

### Test for Starch

1. Add 2 cm<sup>3</sup> of the starch solution to a test tube.
2. Add 2 drops of iodine solution and record the colour change.

### Test for Glucose

1. Mix 2 cm<sup>3</sup> of the glucose solution with 2 cm<sup>3</sup> of the Benedict's reagent.
2. Heat the mixture in a water bath at a temperature of 60°C.
3. Observe and record the colour changes.

### Testing for Protein

1. Mix 2 cm<sup>3</sup> of the protein solution with the 2 cm<sup>3</sup> of biuret reagent.
2. Record the colour change.

Use these three tests to identify the contents of three unknown samples and some different types of food.