

1. What is the purpose of the experiment?
 To determine the effect of temperature on the rate of reaction between hydrogen peroxide and potassium iodide.

2. What are the variables in this experiment?
 Independent variable: Temperature (°C)
 Dependent variable: Rate of reaction (measured by time taken for color change)

3. What is the hypothesis?
 As temperature increases, the rate of reaction will increase.

4. What are the materials and apparatus used?
 Hydrogen peroxide solution, Potassium iodide solution, Sodium metabisulfite solution, Starch solution, Water, Test tubes, Test tube rack, Stopwatch, Thermometer, Water bath.

5. What is the procedure?
 1. Prepare a series of test tubes containing different volumes of hydrogen peroxide and potassium iodide solutions.
 2. Place the test tubes in a water bath at different temperatures.
 3. Add a fixed volume of sodium metabisulfite solution to each test tube.
 4. Add a fixed volume of starch solution to each test tube.
 5. Record the time taken for the solution to turn blue.

6. What are the results?
 The rate of reaction increases with increasing temperature.

7. What is the conclusion?
 Temperature has a significant effect on the rate of reaction between hydrogen peroxide and potassium iodide.