

The following table shows the results of the experiments conducted on the effect of temperature on the rate of reaction between hydrogen peroxide and potassium iodide. The reaction is catalyzed by the presence of a small amount of potassium iodide. The rate of reaction was measured by the volume of oxygen gas evolved over a period of five minutes.

Temperature (°C)	Volume of Oxygen (cm <sup>3</sup> )
10	10
20	20
30	40
40	80
50	160

It is evident from the above table that the rate of reaction increases with an increase in temperature. This is due to the fact that at higher temperatures, the molecules of hydrogen peroxide and potassium iodide possess more kinetic energy and are therefore more likely to collide with sufficient energy to overcome the activation energy barrier.

The following graph shows the relationship between the rate of reaction and temperature. The rate of reaction is plotted on the y-axis and temperature on the x-axis. The curve shows that the rate of reaction increases exponentially with temperature.

The following table shows the results of the experiments conducted on the effect of concentration on the rate of reaction between hydrogen peroxide and potassium iodide. The reaction is catalyzed by the presence of a small amount of potassium iodide. The rate of reaction was measured by the volume of oxygen gas evolved over a period of five minutes.

Concentration (M)	Volume of Oxygen (cm <sup>3</sup> )
0.1	10
0.2	20
0.3	30
0.4	40
0.5	50

It is evident from the above table that the rate of reaction increases with an increase in concentration. This is due to the fact that at higher concentrations, there are more molecules of hydrogen peroxide and potassium iodide per unit volume, and therefore a greater number of collisions occur between the molecules.

The following graph shows the relationship between the rate of reaction and concentration. The rate of reaction is plotted on the y-axis and concentration on the x-axis. The curve shows that the rate of reaction increases linearly with concentration.