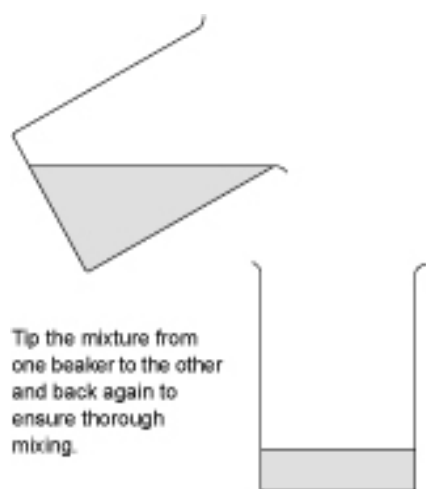


Student worksheet: Rate of reaction – the effect of concentration and temperature

Introduction

In this experiment, two colourless solutions are mixed to make a solution which becomes dark blue. Changing the concentration or temperature of the solutions changes the time required for the blue colour to develop.



What to record

The conditions and the times for reactions to occur.

What to do

1. Place 50 cm³ of solution A in a 250 cm³ beaker.
2. Place the same volume of solution B in a second beaker.
3. Mix the two solutions by pouring from one beaker into the other several times.
4. Note the time required for a reaction to occur (formation of blue colour).
5. Repeat, but use solution A that has been diluted to one half the concentration. Note the time for the reaction to occur.
6. Repeat using solution A warmed to 35 °C. Note the time for a reaction to occur.

Safety

Both solutions are of **Low Hazard**

Questions

1. Why does increasing the concentration usually result in an increased rate of reaction?
2. Why does increasing the temperature usually result in an increased rate of reaction?



3. How could this experiment be set up so it took exactly 10 min to turn blue?

Credits

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