Strong and weak acids: Worksheet 4.10

Titration curves

Some students measured 25 cm3 of 0.1 mol/dm3 sodium hydroxide solution into a conical flask. They swirled the flask as hydrochloric acid was added 1 cm3 at a time, and monitored the pH of the mixture.

The titration curve they obtained was:

1. Which ion from the sodium hydroxide causes the high pH at the start?

1. What reaction takes place as the hydrochloric acid is added?

1. Add labels to the titration curve to show what is happening in each part of the graph.
2. What volume of acid was needed to neutralise the 25 cm3 of sodium hydroxide?

1. Was the acid more or less concentrated than the sodium hydroxide?

1. How would that last part of the curve change if ethanoic acid (a weak acid) was used?

1. How would that first part of the curve change if a weak alkali was used?