

CHEMISTRY

Lab 6: Enthalpy Change of Neutralization

1. Pour 25 cm^3 of 1.0 mol dm^{-3} HCl into a cup and record its temperature.
2. Pour 25 cm^3 of 1.0 mol dm^{-3} NaOH into a cup and record its temperature.
3. Now pour NaOH into the HCl solution and, by continuous stirring, record the temperature every 15 seconds.
4. That was reaction (a):
 - a. 25 cm^3 of 1.0 mol dm^{-3} HCl + 25 cm^3 of 1.0 mol dm^{-3} NaOHRepeat with the following reactions:
 - b. 25 cm^3 of 1.0 mol dm^{-3} HCl + 25 cm^3 of 2.0 mol dm^{-3} NaOH
 - c. 25 cm^3 of 1.0 mol dm^{-3} H_2SO_4 + 25 cm^3 of 1.0 mol dm^{-3} NaOH
 - d. 25 cm^3 of 1.0 mol dm^{-3} H_2SO_4 + 25 cm^3 of 2.0 mol dm^{-3} NaOH
 - e. 25 cm^3 of 1.0 mol dm^{-3} CH_3COOH + 25 cm^3 of 2.0 mol dm^{-3} NaOH
5. Find the enthalpy change of neutralization of each reaction.
6. Tabulate your results and draw conclusions.

Wear gloves and goggles at all times!!