

- 1) To determine the enthalpy of dissolution of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ in water at room temperature
- 2) To determine the enthalpy of neutralisation of Strong acid $\frac{M}{2} \text{HCl}$ and Strong base $\frac{M}{2} \text{NaOH}$
- 3) To determine the heat of displacement (enthalpy change) of Cu from CuSO_4 solution by Zn-dust

To determine the enthalpy of dissolution of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ in water at room temperature

Ans

Apparatus required :- Polythene bottle, cork having two holes, 2-100 ml beakers, Measuring cylinder

Chemicals required :- copper sulphate and distilled water

Theory :- Heat of solution is the change in enthalpy when one mole of a substance is dissolved in a large amount of solvent so that further dilution does not change in enthalpy. Generally for 1 mole of solute 400 moles of solvent is recommended. Heat of solution is due to ionisation or some hydrate formation. Dissolution may be exothermic or endothermic process.

Diagram

