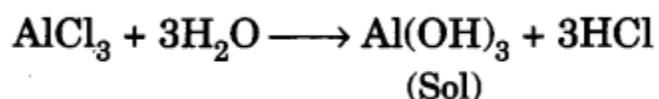


To Prepare Aluminium Hydroxide, [Al(OH)₃] sol

Theory

Aluminium hydroxide sol is hydrophobic in nature. It is obtained by hydrolysis of aluminium chloride



Dialysis is done to remove hydrochloric acid (produced as a result of hydrolysis of aluminium chloride) because aluminium hydroxide sol is affected by the presence of ionic impurities.

Apparatus

Conical flask (250 ml), beaker (250 ml), a boiling-tube, glass-rod, funnel, round-bottom flask, iron stand with a clamp, wire-gauze, tripod-stand, burner and a burette or a dropper.

Materials Required

Aluminium chloride (2% solution) and distilled water.

Procedure

1. Take a 250 ml conical flask and clean it by steaming-out process as shown in Fig.

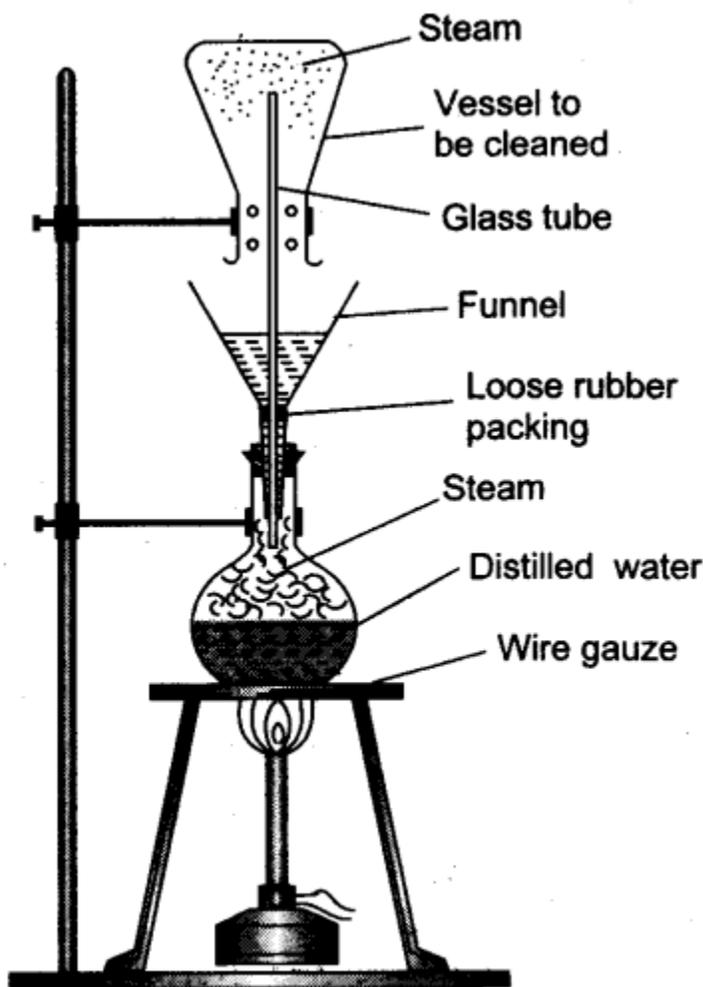


Fig. Steaming-out process for cleaning conical flask.

2. To this cleaned flask, add 100 ml of distilled water and heat it to boil by placing the flask on a wire-gauze.
3. Add ferric chloride solution dropwise (by the use of a burette or a dropper) to the boiling water.
4. Continue heating until deep red or brown solution of ferric hydroxide is obtained. Replace the water lost by evaporation during boiling at regular intervals.
5. Keep the contents of conical flask undisturbed for sometime at room temperature. Label the solution as "ferric hydroxide sol".