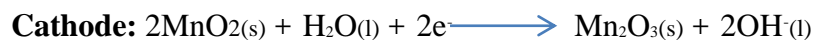




Alkaline batteries

It is the improved form of dry cell. It consists of a zinc cylinder which acts as anode and a graphite rod (carbon rod) at the center of the container which acts as the cathode. The zinc cylinder is filled with an electrolyte consisting of powdered zinc, KOH and MnO₂ in the form of paste. The zinc cylinder has an outer insulation of card board case (Fig. 3.15). The cell reaction is as follows:



Net Reaction:



Advantages of alkaline battery over dry battery

Zinc does not dissolve in a basic medium.

The life time of alkaline battery is longer than the dry battery because zinc cylinder is not involved in cell reaction. Zinc powder present in the electrolyte is only involved in reaction. So, there is no corrosion of zinc cylinder.

It gives constant voltage when the current is drawn from it.

Even in hot weather, it performs better than other type of batteries.

Uses

It is used in cameras, calculators, radios and watches.