

Answer on Question #53360 – Chemistry – Inorganic Chemistry

Question:

What is salt bridge? Explain with an example.

Answer:

A **salt bridge** is a U-shaped device containing concentrated solution of an inert electrolyte like KCl, KNO_3 , etc., or a solidified solution of those electrolytes in agar-agar solution and gelatin. It connects the oxidation and reduction half-cells of a galvanic cell. The inert electrolytes present do not take part in redox reaction of the cell and don't react with the electrolyte that has been used.

As electrons leave one half of a galvanic cell and flow to the other, a difference in charge is built up. If no salt bridge were used, this increasing charge difference would eventually prevent further flow of electrons. The salt bridge solves these problems. It has two main functions:

1. To allow the flow of ions from one solution to another without mixing of the two solutions and completing the electrical circuit.
2. To maintain the electrical neutrality of the solutions in the two half cells.

