

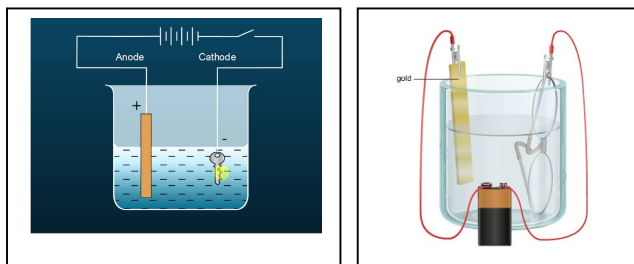
EXPERIMENT - 2

ELECTRO PLATING

Aim : Coating an iron key with copper by electro plating method.

Required : Small beaker, Electric wires, 6V or 9V battery, Metallic clips-2, Distilled water, Copper sulphate crystals, Iron key, Sulphuric acid, Copper plates-2 (5 x 2 cm size)

Description : If electricity passes through copper sulphate solution, it forms copper and sulphate ions. Thus copper metal is coated on iron key. This is electro plating method.



Procedure:

1. Prepare copper sulphate aqueous solution by adding copper sulphate and distilled water in beaker.
2. Add small amount of Sulphuric acid in it.
3. Attach electric wires to 9V battery.
4. Hold the free ends of electric wires on both sides by using metallic clips.
5. Connect a copper plate to one clip (Positive electrode) and iron key to another clip (Negative electrode).
6. Keep copper plate and iron key in copper sulphate solution. (Copper plate and iron key do not touch with each other.)
7. Allow the flow of current through the solution for 10 Minutes.
8. Note down the observation.

Observations:

- We observe small air bubbles formed in solution.
- A brown colour (Copper metal) is coated on iron key.
- The amount of brown coating is increased with increase of time of flow of current through the solution.

Precautions :

- No oil or grease is stick on the key. Rub the key with a sand paper before experiment.
- Acid is used to increase the conductivity of solution. So add acid slowly as it is danger.

Result : Observed the coating an iron key with copper by electro plating method.