

EXPERIMENT NO: 05  
**STUDY OF OSMOSIS**

**PRINCIPLE**

Osmosis is the spontaneous net movement of solvent molecules through a selectively permeable membrane into a region of higher solute concentration, in the direction that tends to equalize the solute concentrations on the two sides. It may also be used to describe a physical process in which any solvent moves across a selectively permeable membrane (permeable to the solvent, but not the solute) separating two solutions of different concentrations. Osmosis can be made to do work. Osmotic pressure is defined as the external pressure required to be applied so that there is no net movement of solvent across the membrane. Osmotic pressure is a colligative property, meaning that the osmotic pressure depends on the molar concentration of the solute but not on its identity.

**MATERIALS REQUIRED**

Petri-dish, water, potato, sugar solution, cork and capillary tube

**PROCEDURE**

1. Take a potato tuber, remove its outer covering from one end and cut the same end flat.
2. Scoop out a cavity from the other end of the tuber running almost up to the bottom.
3. Fill the cavity with the sugar solution and fit an airtight cork fitted with a capillary tube on the upper end of the cavity.
4. Place the capillary fitted potato tuber in the water- filled petri-dish.
5. Mark the solution level in the tube and watch the experiment for some time.

**OBSERVATION**

After some time the level of the solution in the tube increases

Mark the level of solution when it stops to move.

**RESULT**

**CONCLUSION**