

Experiment 3

I. Aim : To study the process of osmosis with a Potato osmoscope.

II. Materials Required:

- i. Potato
- ii. Knife or scalpel.
- iii. Watch glass
- iv. Concentrated salt solution
- v. Water
- vi. Needles.

III. Procedure:

- i. Slice the potato into two equal halves with the help of a scalpel or a blade. The outer skin is to be peeled off. Since the potato shape is irregular, slice the halves into squares
- ii. From the mid-region of the potato, scoop from the soft parenchyma so as to form a tiny cavity of a square or a circular shape. At the base, the cavity prepared should have a minimum thickness.
- iii. Fill up half the cavity with the freshly prepared 20% salt solution. Into the cavity, fix a pin in a way that the mark is in the same line with the layer of the salt solution.
- iv. Set up the osmometer in a Petri dish/beaker that is filled with water in a way such that 75% of the potato osmometer is immersed in water
- v. The set up should remain uninterrupted for close to 1 hour.
- vi. Notice the salt solution in the osmometer towards the end of the experiment

IV. Observation:

After a period of time, within the osmoscope, the salt solution rises.

V. Inference:

An increase in the level of sucrose solution is observed in the osmometer. It is because of the entrance of water due to endosmosis from the beaker

VI. Precautions:

1. Be careful using sharp objects such as blades or needles.

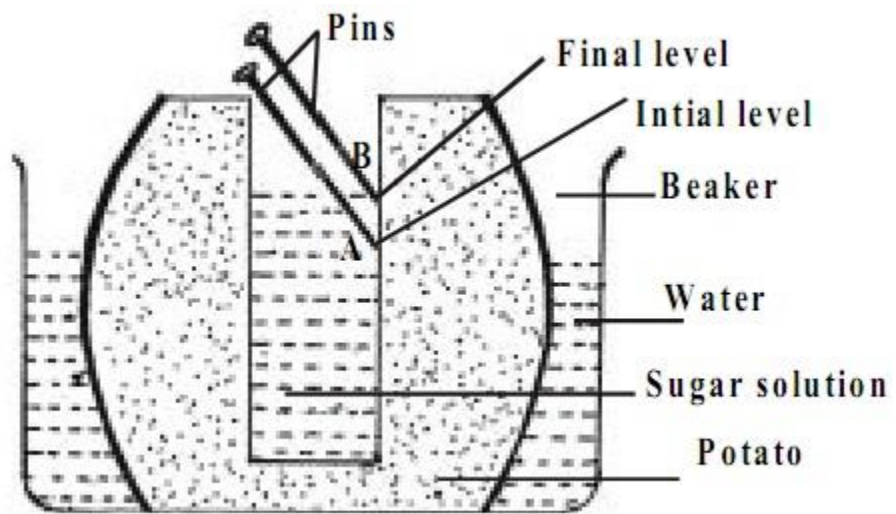


Fig: Potato Osmoscope.