

# Aim 12

## To find out the Osmotic Potential of Cell Sap by Plasmolytic method

### Requirements

Watch glass, slides, microscope, brush, blade, forceps test tubes, beakers, measuring cylinder, cover slip and leaves of *Tradescantia*.

### Preparation of Sucrose solution of different molarities:

1 M sucrose solution is prepared and further used to prepare the series of solutions of different molarity by dilution.

### Procedure

1. Leaf of the plant is taken and peeled using forceps from the vertical side.
2. The peel is cut into small pieces.
3. Take nine test tubes and put solutions of different molarity into each marked from 1 to 9.
4. Peels of given material is added to the respective test tubes containing solutions of different molarity.
5. Leave all tubes undisturbed for 15-20 min.
6. Take out the peel and keep them in shade. Use coverslip to cover and observe under the microscope.
7. Count the no. of intact cells and plasmolysed cells.

### Calculation

$$\text{O.P.} = \{M \times 22.4 \times (\text{TxT})\} / T$$

Where, O.P. = Osmotic pressure

M = Molarity

T = Absolute temperature

t = Room temperature

**Observation Table**

S. No.	Molarity	Total no. of cell in field	No. of cells intact	No. of plasmolysed cell	% of plasmolysis

**Precautions**

1. Peel should be taken from the lower surface of leaf.
2. Peel should be one cell thick.