

Osmosis

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In the previous segment of the chapter 'Cell - The Fundamental Unit of Life', we studied the process of **Diffusion**. In this segment, let us get acquainted with the process of Osmosis.

How are molecules Transported in and out of the cells?

Molecules are continuously transported across the cells. Some of them need proteins and energy to travel across the cell. Transportation of the molecules is carried out by two processes:

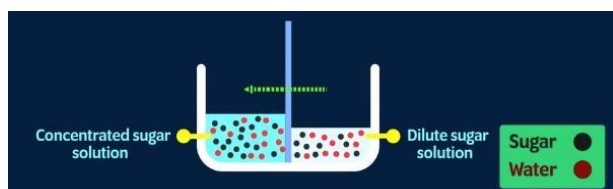
- **Active Transport** - It requires the expenditure of energy. The energy used is in the form of ATP molecules. The transportation is carried out by protein molecules present on the cell membrane.
- **Passive Transport** - It does not require energy and carries out the movement of molecules without spending energy. Diffusion is a type of passive transport.

What is Osmosis?

The movement of water from higher water concentration to lower water concentration through a semi-permeable membrane is called **Osmosis**.

For example,

Consider a container which is partitioned by the semi-permeable membrane and sugar solutions are added in both partitions. One side has a concentrated sugar solution while the other has a dilute sugar solution. So, the concentration of water in the diluted solution is more compared to the concentrated solution. After some time, water molecules start moving from the side of high concentration to the side of low concentration. This movement will occur till the concentration of water is balanced and equalized on both sides. This process is called **Osmosis**.



Osmosis

Summary

Transportation of Molecules	Molecules are continuously transported in and out of the cell. Transportation of the molecules is carried out by two processes: <ul style="list-style-type: none">• Passive Transport• Active Transport
Osmosis	The movement of water from higher water concentration to lower water concentration through a semi-permeable membrane is called Osmosis .

What's next?

In our next segment of Class 09 Science, we will learn more about **Osmosis**.