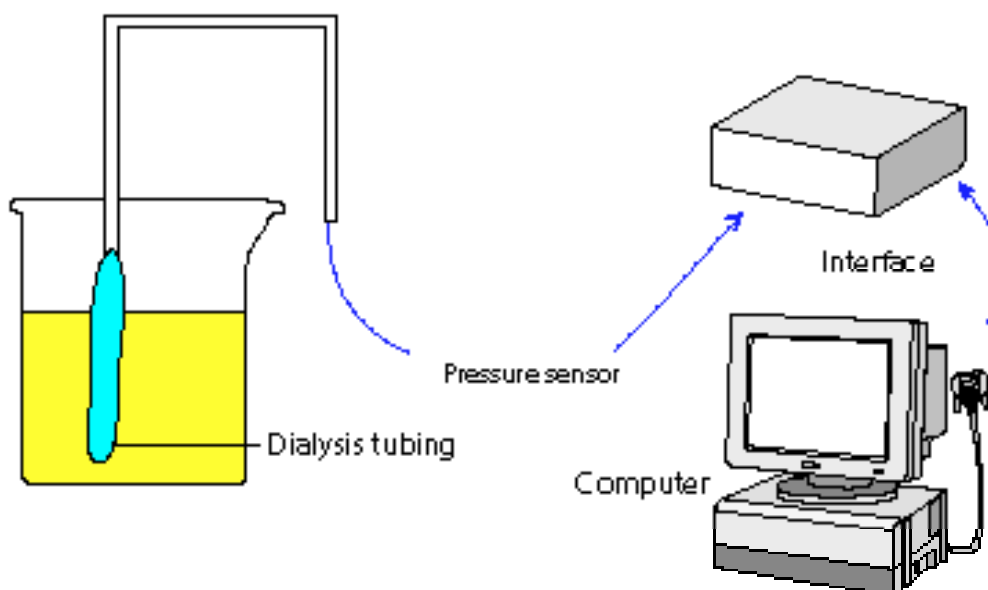


Osmosis



A pressure sensor can be used to monitor the progress of osmosis. In this experiment a dialysis bag containing sucrose solution is placed in a beaker of water. Over a period of time, water enters the bag and even very small changes can be measured. Initially, the rate of osmosis is rapid, but as the concentration gradient changes the rate of osmosis decreases.

A manometer sensor can be substituted for the pressure sensor.

Apparatus

Sucrose solutions, Dialysis ('Visking') tube, connecting tube for the sensor, beaker of water for the dialysis bag, interface, pressure sensor.

Setting up

Connect the tube from the suspended dialysis bag to the sensor.

Connect the sensor to socket 1 on the interface.

Some systems recognize the sensors you attach automatically, in others you do this yourself. If the sensor has a zero control you may want to use it when your experiment is ready to run.

Recording the data

Record for up to 1 hour. The exact time will depend on the concentration of the solutions.

You can repeat the experiment using a different sucrose solution concentration

Using the results

How is a change in volume shown on your graph?

What does the graph tell you about the change in volume during osmosis?

Why does the pressure change?

What would happen if you used a more concentrated sucrose solution?

Save your data on disk. Print the graph.

