

SBI 3C – OSMOSIS LAB

Purpose: to observe the properties of the cell membrane

Material and Equipment:

- 1% starch solution
- 5% salt solution
- Dialysis tubing
- Elastic band
- 400 mL beaker
- Iodine reagent
- Silver nitrate solution
- Test tube

Procedure:

Part 1: Starch test

1. Place 3 mL of starch solution in a test tube and add 2 or 3 drops of iodine. Describe the colour change.

Part 2: Salt test

1. Place 3 mL of sodium chloride solution in a test tube.
2. Add 1 mL of silver nitrate and describe the reaction. _____

Part 3:

1. Obtain 15 cm of dialysis tubing, moisten, open and then seal tightly one end with a knot.
2. Pour 10 mL of starch solution and 10 mL of salt solution into the membrane. Knot the open end tightly. If you spill, make sure you rinse the tubing with distilled water (why? _____)
3. Place the prepared bag in a 400mL beaker. Add water to the level of the solution in the bag.
4. Add 20 drops of iodine solution to the water in the beaker until the water is amber coloured.
5. Let the solution sit for 15 to 20 minutes.
6. Note any colour changes in the bag **or** beaker and record below under Observations.
7. Pour 5 mL of the solution in the beaker into a test tube. Add 2 mL of silver nitrate solution and observe.
8. Clean up thoroughly and return all equipment to where you got it.

Observations:

1. What colour changes occurred (if any) in the
 - a. Bag? _____
 - b. Beaker _____
2. What colour changes occurred in the test tube? _____

Conclusions:

1. What substances passed though the membrane? What properties of this substance allowed it to pass through?

2. What substances did not pass through the membrane? What properties of this substance stopped it from passing through?

3. What kind of membrane is dialysis tubing? _____
4. What is dialysis?

