

Osmosis Lab

Purpose:

Materials:

Procedure:

1. Label 3 cups; H₂O, .5M Sucrose, and 1M Sucrose
2. Fill each cup 2/3 full of water and follow Procedures 3-5, otherwise fill each cup with the appropriate molar solutions provided by your instructor and **proceed to procedure 6.**
3. In the .5M Sucrose cup dissolve 5 sugar cubes or packets.
4. In the 1M Sucrose cup dissolve 15 sugar cubes or packets.
5. Put nothing into the water in the H₂O cup.
6. Now construct 3 cell models as instructed by filling 3 dialysis tubes with 10ml of .5M Sucrose solution.
7. Find the mass of each cell using the balance, and record in your data table for time 0. **Make sure you keep track of which cell is which.**
8. Place one cell model in each solution and let sit for 5 minutes.
9. Blot dry and remeasure the mass of each cell. Record in data table for time 5 minutes. **Don't forget which cell you are working with, and which cup it came from.**
10. Put cells back in cups and repeat measurements every 5 minutes for a total of 30 minutes.
11. Graph your results showing time on the X-axis and mass on the Y-axis. Use a different color for each cell and make a color key for your graph. Follow all graphing rules.

Data/Observations:

Data Table: Time vs. Mass for Three Cell Models

	0 Min	5 Min	10 Min	15 Min	20 Min	25 Min	30 Min
Cell 1 (H ₂ O Cup)							
Cell 2 (.5M Cup)							
Cell 3 (1.0M Cup)							

Conclusions:

1. Use the words Hypotonic, Hypertonic, or Isotonic to describe each cell in relation to its environment.

2. Which cell had the greatest change in mass? Explain why it did.

3. Which cell had the least change in mass? Explain why it did.