

# Membrane Diffusion Worksheet

## Data Table and Observations

Initial Mass of Cores (g)	Concentration of Sucrose Solution (M)	Observations	Final Mass of Cores (g)	Final Observations	Percent Change in Mass (%)

## Post-Lab Analysis and Calculations

- Calculate the Percent Change in Mass for the two samples. The Percent Change in Mass is calculated using equation 1.

$$\frac{(\text{Final Mass of Cores in grams}) - (\text{Initial Mass of Cores in grams})}{(\text{Initial Mass of Cores in grams})} \times 100 = \text{Percent Change in Mass} \quad \text{Equation 1}$$

- Obtain data from other members of the class and average all the values for each sucrose solution. Record these values in the data table below.

Sucrose Solution Concentration (M)	Average Percent Change in Mass (+ or -)
0.1	
0.2	
0.3	
0.4	
0.5	
0.6	

- Plot a graph of Percent Change in Mass vs. Sucrose Solution Concentration. The graph should have positive and negative values on the *y*-axis with the zero line (no change in mass) serving as the *x*-axis.
- Review the graph created in question 3. How did soaking the potato cores in a sucrose solution affect the mass of the potato cores? Is there a correlation between the molarity of the sucrose solution and the change in mass? If so, how was the mass affected. Using the information in the *Background* section, construct a hypothesis as to what is occurring within the cells of the potato.