Name _____

Rubric for the Potato Core Lab

_____/15

5 points	Data table is complete and accurate
5 points	Graph is complete and accurate One point for each of the following Titled appropriately Axis titled appropriately Graphed correctly Scaled appropriately Professional appearance
5 points	Accurately and completely answered analysis questions 1-7 on a blank piece of paper

Included in this report will be:

1. This page with the data table complete as your title page
2. The graph of your data (change in mass (g) v. % sucrose solution)
3. Analysis questions 1-7 completely answered on a separate sheet of paper.

	0 M Sucrose	.2 M Sucrose	.4 M Sucrose	.6 M Sucrose	.8 M Sucrose	1.0 M Sucrose	U S
Day 1 Mass (g)							
Day 2 Mass (g)							
Change in Mass* (g) Day 2-Day1							

*Note: you must indicate either positive or negative change in mass.

Procedure

1. Obtain seven potato cores which are approximately the same size.
2. Obtain seven lengths of string, seven pins and seven labels.
3. Create a label for each of your seven cores (0M-1.0M as well as your unknown) and attach label to your core by the string and pin.
4. Once you have labeled all your pins, mass each (with pin, string and label) and record the mass in the appropriate location on the data table.
5. Immerse each potato core in the appropriate solution for twenty-four hours at which point you should re-mass each core and calculate any mass change that might have occurred. Record the new mass and change in mass values in the appropriate location on the data table.

Data Analysis

1. Calculate the positive and negative mass change for each core and record in the appropriate place on the data table
2. Construct a graph of your results titled change in mass (g) v. sucrose concentration

Analysis

On blank piece of paper completely address each of the following items.

1. Refer to your data and briefly discuss the general relationship that seems to exist between the final mass of the potato cores and concentration of sucrose.
2. At what concentration of sucrose would you expect no change in the mass of your potato core? Explain your reasoning and briefly design an experiment to test your value.
3. What was the sucrose concentration in the unknown solution? Explain your reasoning.
4. What range of sucrose concentrations were hypertonic to the potato cores, hypotonic to the potato cores? Explain your reasoning.