Osmosis Lab

This will be the first FULL lab report you turn in. This means that you will complete the entire report based on the IB lab format guide I gave you.

You will be answering analyzing the following question:

* How do different concentrations of NaCl affect the rate of osmosis in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells?
  + You will fill out the blank with something of your choice (grapes, carrots, etc.)

Your procedure should include you measuring the weight of your item over time since you will be looking at rate of change.

The concentrations you will be using are 0.0, 0.5, 1.0, 1.5, and 2.0 M NaCl.

Use the following information to make your solutions:

Step 1 – find how many moles of NaCl are the solutions

Molarity = mol/L

0.5mol/L = x 0.25L = 250ml

.25L

X= .125mol

Step 2 - Now convert moles to grams

.125 moles x 58.4g/mol = 7.3g NaCl

Using the information above, what is the independent variable? Dependent variable?

You need three control variables. These are variables that stay the same throughout the lab that could affect the results. Number one is an example, you do not have to use it.

1. Initial weight of samples (g)

2.

3.

# Prelab – Due on Friday

Background - This section should introduce your test subject, include information about osmosis, and the tonicity of solutions and the impact those have on cells.

Hypothesis – which will have the greatest/lowest rate of change and why

Materials – include a detailed list of materials

Procedure – This procedure should be written in paragraph form and in past tense for the final lab. Since this is new for this lab you may find it easier to create a step by step procedure for the lab and then change it to past tense after you complete the lab.

# Final lab – Due on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Results – include raw data of the weight measured at each time interval. In a separate chart record the cumulative weights, or change in weights. To calculate the rate divide your cumulative weight for 30 min by the time interval (30 min). Graph both the cumulative weights and the rates.

Conclusion – Make sure to include a discussion of your results and if they matched your hypothesis. You also need three limitations and three results. Remember, human error and faulty equipment do not count.