# Diffusion and Osmosis Lab Rubric

| Lab Report Components | Points Possible | Points Earned |
|---|---|---|
| Pre-Lab: Diffusion<br>- Data chart filled in and picture of lab setup<br>- Analysis questions 1-6<br>- Chart filled in for lab setup with hypothesis | <br>3<br>6<br>4 | |
| 1B: Dialysis Tubing Bags<br>- Question: What are the sucrose molarities of 6 unknown solutions?<br>- Variables: independent, dependent, and at least 2 constants<br>- Materials and Procedures: write "See lab handout"<br>- Data Table: group data (includes data, calculations, and molarity of solutions) and mean data (includes mean % change in mass)<br>- Graph: include title, label axes with units, correct orientation and scale, and correct data points<br>- Analysis questions 1-5<br>- Conclusion: What were the concentrations of each of the unknown solutions? How did you determine what the concentrations were?<br>• Within your explanation, relate water potential to solute concentration and solute potential, discuss where the high and low water potential where located, discuss the general trend that you saw in your graph and why that occurred (relate back to your hypothesis)<br>• Discuss errors that could have occurred and how that could have impacted your results | <br>1<br>3<br><br>1<br>4<br>7<br><br>10<br>3<br>7<br>2 | |
| 1C: Potato Cores<br>- Question: What is the molar concentration of the solute within the potato cores?<br>- Variables: independent, dependent, and at least 2 constants<br>- Materials and Procedure: write "See lab handout"<br>- Data Table: group data (including data and calculations) and mean data (includes mean % change in mass)<br>- Graph with **molar concentration** of the potato indicted: include title, label axes with units, correct orientation and scale, and correct data points | <br>1<br>3<br>1<br>4<br>8 | |
| 1D: Calculations and Experimental Data<br>- Using the equation listed and the molar concentration from the graph in 1C, calculate the solute potential for the potato<br>- Then, calculate the water potential for the potato<br>- Analysis questions 1-10<br>- Analysis question 11: In winter, grass often dies near roads that have been salted to remove ice. What causes this to happen? | <br>6<br>4<br>20<br>2 | |
| Total | 100 | |