**Some guidance of Osmosis Lab Report**

**Results** [this is what your tables/graph should look like]

Table 1: Measurements for how concentration gradients affect osmosis in potato cores.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Percent Mass Change in Potato Cores Due Different Concentration Gradients** | | | | | | | |
| **Sucrose Concentration (M)** | **Initial Diameter (mm)** | **Initial Length (mm)** | **Initial Mass (g)** | **Final Mass (g)** | **Mass Difference (g)** | **% Mass Change (Group)** | **% Mass Change (Class Ave.)** |
| **0.0** |  |  | **7.4** | **8.4** | **1.0** | 14.1 | 8.63 |
| **0.2** |  |  | **7.2** | **7.6** | **0.4** | 4.9 | 1.58 |
| **0.4** |  |  | **7.3** | **7.2** | **0.0** | 0.1 | 4.10 |
| **0.6** |  |  | **7.5** | **6.2** | **-1.4** | 18.3 | 18.78 |
| **0.8** |  |  | **7.7** | **5.2** | **-2.5** | 32.5 | 29.80 |
| **1.0** |  |  | **7.5** | **4.8** | **-2.7** | 35.7 | 37.48 |

Table 2: Meausrements for group and class average percent change in mass.

|  |  |  |
| --- | --- | --- |
| **Sucrose Concentration (M)** | **% Change in Mass (Group)** | **% Change in Mass (Class Ave.)** |
| **0.0** | 14.1 | 8.6 |
| **0.2** | 4.9 | 1.6 |
| **0.4** | 0.1 | 4.1 |
| **0.6** | 18.3 | 18.8 |
| **0.8** | 32.5 | 29.8 |
| **1.0** | 35.7 | 37.5 |

**DISCUSSION** [here is extra help for each part of your discussion – refer to other guidance I have given as well]

**Analysis**

* Describe the pattern and what is happening in each section of the graph – refer to biology vocab and concepts to explain it!!!!!!!!!
* Point out where you think hypo section and hyper, and ISOTONIC line (draw on)
* Predict what the concentration of the potato core actually WAS
* Use the rest of my guidance
* Anaylse what they looked/felt like for each section of the graph
  + Turgor pressure, flaccid, etc.

**Evaluation**

KEY: justify and explain your thinking EVERyWHERE

Accuracy – how close are your results to the true value?

* Is affected by **systematic** errors
  + When all measurements are off by the same amount
  + Caused by instruments being off/not calibrated right –
  + Hard to tell it is present – it has just shifted all your data (or graph)
  + Test by using different instruments – doing again

Reliability – how likey are you to get the same results each time?

* Is affected by random erorrs?
  + Usually caused by …. People because they can’t always be perfect
  + Temp up or down randomly
  + Size of the potato –
  + Amount of water in each cup – change the gradient of concentration overtime
  + Time in solution – not all in the same amount
    - Tell me the degree to which you think these impacted your data

Validity – wsa this method able to answer your question?

* Was the potato core a good way to simulate a cell??
  + N – no organelles
  + N – no membrane!!!! What???