**Potato Osmosis Post-Lab**

Potato cores of known mass were placed into four unknown sucrose solutions overnight (red, blue, green, and yellow food coloring was added to each beaker to tell them apart). The next day, the potato cores were removed from the solutions and weighed. The data collected is in the table below.

Red

Blue

Green

Yellow

Fill in the missing parts of the table using your knowledge of the potato lab, osmosis, diffusion, and *tonicity* (the relative concentration of solutions that determine the direction and extent of diffusion).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Solution** | **% Change in Mass** | **Did water ENTER or LEAVE the potato cells?** | **Is the Solution: Concentrated, At/Near Equilibrium, or Not Concentrated** | **Order of Solutions’ Concentrations (1=lowest; 4=highest)** |
| Red | 6% |  |  |  |
| Blue | -7% |  |  |  |
| Green | -31% |  |  |  |
| Yellow | 17% |  |  |  |

Use the graph of the data below to answer the questions on the back page.

1. What is the actual sucrose concentration in the potato cell? Use the line of best fit on the graph to find this. (Hint: Percent change in mass is zero)
2. What is the term for the condition in #1?
3. On the graph, the data points are labeled A, B, C, and D. What type of solution is each potato core in? (*very concentrated, slightly concentrated, at/near equilibrium, not concentrated*)
* A = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* B = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* C = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* D = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_