OSMOSIS AND DIFFUSION LAB #3-Dialysis

NAME______

OSMOSIS WITH DIALYSIS BAGS:

The flasks used in this lab contain sucrose solutions of various molarities (0.2, 0.4, 0.6, 0.8, and 1.0 M) but the lab tech forgot to label the flasks with the correct concentrations. The unknown flask contains a sucrose solution in between 0.2M - 1.0 M. **DESIGN AN EXPERIMENT** TO DETERMINE THE MOLAR CONCENTRATIONS OF THE MYSTERY SOLUTIONS (A, B, C, D, and E) including the UNKNOWN.

Question you are trying to answer. (It's NOT what concentration is in which flask?)

HYPOTHESIS:

INDEPENDENT VARIABLE= _____

DEPENDENT VARIABLE = _____

Identify at least 4 CONTROLLED VARIABLES in your lab set up

Will this experiment have a CONTROL GROUP? IF SO, how would you set this up?

DRAW A PICTURE OF YOUR EXERIMENTAL DESIGN:

Include enough DETAILS that another group could duplicate your experiment.

DATA COLLECTION: CREATE A DATA TABLE to collect data below.

GRAPH YOUR DATA

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IDENTIFY THE MOLARITY OF THE MYSTERY SOLUTIONS (A, B, C, D, or E)

0.0M = _____ 0.2M = _____ 0.4M = _____ 0.6M = _____ 0.8M = _____ 1.0M = _____

_____M = Molarity of UNKNOWN SOLUTION

1. EXPLAIN the relationship between the change in mass and the molarity of sucrose in or out of EACH of the dialysis bags. Use vocab words like: water potential, solute potential, concentration, molarity, hypotonic, hypertonic, isotonic

2. PREDICT WHAT WOULD HAPPEN to the % mass change of EACH BAG in the following experimental set up: Six (6) dialysis bags are each filled with sucrose solutions of different concentrations. All of the bags (0.0M, 0.2M, 0.4M, 0.6M, 0.8M, 1.0M) are placed in a 0.4M sucrose solution.

3. A dialysis bag is filled with distilled water and then placed in a sucrose solution. The bag's initial mass is 20 g and its final mass is 18 g. Calculate the percent change of mass, **showing your calculations** below.