Egg Osmosis LAB

Directions: This lab will span several days, so make sure you do only what you are supposed to do each day and DO NOT MISPLACE YOUR LAB SHEET!

Day 1

a. Supplies: 1 egg 1 container 1 cup vinegar

b. Weigh the egg and record the data in your data table (make sure you are recording the weight of the egg only).

c. Pour 1 cup of vinegar into the container and then gently place the egg into the container.

d. Record “egg in vinegar observations” in the table provided. Be specific and provide details (3

observations, minimum).

e. Complete the “Predictions for next observation day” section of your data table.

Day 2

1. Record your “egg in vinegar observations” (6 observations, minimum).
2. Weigh your egg and record the data (make sure you are recording the weight of the egg

only.

1. Calculate the change in weight and circumference. Use this equation:

**Day 1 measurement – Day 2 measurement = Change in measurement**

***Be sure to include a + sign if it is a positive difference, and a – sign if it is a negative difference!***

1. Answer questions 1 and 2 under questions and conclusions.
2. Rinse your container out, pour it 2/3 full with corn syrup, and gently add your egg.
3. Record “egg in Corn Syrup observations” (3 observations, minimum)

g. Complete the “Predictions for next observation day” section of your data table.

Day 3

1. Record “egg in Corn Syrup observations” (6 observations, minimum).
2. Weigh your egg and record the data (make sure you are recording the weight of the egg

only.

Calculate the change in weight and circumference. Use this equation:

**Day 1 measurement – Day 2 measurement = Change in measurement**

***Be sure to include a + sign if it is a positive difference, and a – sign if it is a negative difference!***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **RESULTS OF DIFFUSION** | | | |  |
|  | **initial Mass** | **Final Mass** | **Change in Mass** | **Predictions for next day observation** |
| **VINEGAR** |  |  |  |  |
| **SYRUP** |  |  |  |  |
| **WATER** |  |  |  |  |

***Questions & Conclusion:*1. Vinegar is made of acetic acid & water. Explain how it was able to remove the calcium shell.**

**2. (a) What happened to the size of the egg after remaining in vinegar?**

**(b) Was there more or less liquid left in the jar?**

**(c) Did water move into or out of the egg? Why?**

**3. (a) What happened to the size of the egg after remaining in distilled water?**

**(b) Was there more or less liquid left in the jar?**

**(c) Did water move into or out of the egg? Why?**

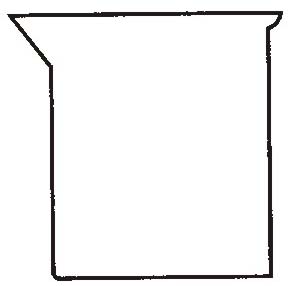
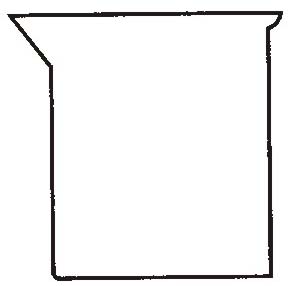
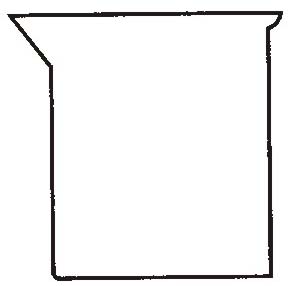
**4. (a) What happened to the size of the egg after remaining in syrup?**

**(b) Was there more or less liquid left in the jar?**

**(c) Did water move into or out of the egg? Why?**

**5. Was the egg larger after remaining in water or vinegar? Why?**

**Sketch your observation  
Draw arrows to show the direction of water moving in and out of egg. Label Hypertonic, Isotonic or Hypotonic**



**Vinegar Syrup Water**

* The vinegar soaked egg..
  + The acid wore away the shell.
  + Egg increased in size.
  + Water in vinegar passed through eggs membrane, from high concentration in vinegar to low concentration in egg.
  + Denaturation of proteins causes egg to become rubbery.