**Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Course and Section Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Lab Assignment: Osmosis**

**Instructions:** After completing the *Osmosis* lab on [this website](https://camosunbiolabs.opened.ca/biology-103-labs/osmosis/), answer the questions below. Please type your responses in different coloured font into the spaces provided. Submit your assignment as directed by your instructor.

**\_\_\_\_\_**

**Qualitative Potato Osmosis Experiment**

1. What did you PREDICT would happen to the potato texture and firmness in each of the three experimental treatments, based on your understanding of osmosis? Explain your reasoning. (3 marks)

2. Complete Table 1 below with your “before” and “after” observations of the three potato pieces. (3 marks)

**Table 1**. Experimental results of placing potato pieces into water, saltwater, and no solution before and after one hour of incubation.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Water | Saltwater | No solution |
| Before | After | Before | After | Before | After |
| Description (size, texture, turgidity)  |  |  |  |  |  |  |

3. Paste the photo of your potato pieces after one hour of incubation in the space below. Include a descriptive figure caption (Figure 1. DESCRIPTION) below the image. (2 marks)

4. State whether the **hypothesis** was supported or not. Explain how your qualitative data supports or does not support the hypothesis. (2 marks)

5. Based on the results of your experiment, answer the following questions:

a. Which solution was **hypotonic** to the potato cells? How could you tell? Describe the change in the potato piece and what this means regarding the movement of water. (2 marks)

b. Which solution was **hypertonic** to the potato cells? How could you tell? Describe the change in the potato piece and what this means regarding the movement of water. (2 marks)

6. Briefly state the purpose of the “No solution” condition in this experiment. (1 mark)

7. What were two **controlled variables** in this experiment? (2 marks)