

Osmosis Lab

Purpose: To study the movement of water across the cell membrane.

Background Info: Look up information about the movement of water that will help you come up with your hypothesis. What is this movement of water called? What type of solution would make a cell shrink? Swell? etc. Don't forget to cite your source!

Hypothesis: This will depend on what your group wants to test. Predict the results of your experiment!

Materials: I will provide the following items. You may or may not need all of them.

beakers/test tubes	potato slices	microscope slides
methylene blue	water	water plant leaves
microscope	iodine	salt
red onion	balance	toothpicks

Procedure: Write down what you will do to conduct your experiment. This will be different for each group, but make sure your instructions are detailed enough for someone else to be able to follow your procedure. Your experiment will either be based on numerical data (*quantitative*) or observations (*qualitative*).

For a quantitative experiment:

- placing pieces of potato into different concentrations of salt water (you make the solutions)
- measure the change in mass (make sure you have replicates and take an average)

For a qualitative experiment:

- Observe cells under the microscope in different concentrations of salt water
- *Draw* your observations!
- Use red onion or Elodea cells to see plant cells, or try it with your own cheek cells (will need to stain with methylene blue in order to see them)

Data: If you are doing a quantitative experiment, you will need to record your data in a data table.

If you are doing a qualitative experiment, you may just draw your observations in the data section. They may be in a table form or drawn individually and labeled.

Conclusion: In your conclusion I will be looking for three things:

- Was your hypothesis supported? Cite your data!
- What caused the changes you saw in the experiment? Be thorough!
- Use the terms hypertonic, hypotonic, and/or isotonic correctly.