**Dialysis Tubing Teacher Notes**

1. **Overview of Lab**

* Part 1 - overview of lab as a whole group. Teacher should share the driving question of the laboratory and any pertinent safety or material location information but not tell students too much about what they will be doing.
* Part 2 - students answer pre-lab questions and prepare procedures for teacher approval.
* Part 3 - students conduct laboratory and collect data
* Part 4 - sharing of data and class discussion of results

1. **Materials**

* Water - it’s best to use distilled water for this experiment. If you don’t have a distiller, you can easily buy jugs of distilled water at any grocery store.
* Iodine\*
* 15% Glucose solution\* - dissolve 150g glucose/dextrose in 1000mL water by applying heat
  + For more detailed instructions or information on using a different percentage of glucose, see this [article](http://www.ehow.com/how_6966226_prepare-glucose-solution.html) from ehow.
* 1% Starch solution - Bring 1000mL of water to a boil. While that’s happening, mix 10g of corn or potato starch in 100mL water (it won’t dissolve). Add the 100mL mixture to the boiling 1000mL mixture and stir until clear (indicating starch is completely dissolved). Allow several hours for this solution to cool before giving it to students.
  + For more detailed information on how to prepare percent by mass solutions (in case you want to change the % of starch or prepare some additional solutions for students to explore) see this [guide](http://www.flinnsci.com/media/396156/labsolutionprep.pdf) from flinn scientific.

\*The iodine and glucose must be ordered. For **ordering information** and some alternative procedures from solution prep see the [teacher notes](https://serendip.brynmawr.edu/sci_edu/waldron/pdf/MembraneTeachPrep.pdf) from the original laboratory (from which this version was adapted). This page will also have information on ordering and **preparing the dialysis tubing**.

**2. Data Sharing and Discussion**

* At the conclusion of the experiment, have students share their findings with the class to provoke discussion. If you have a smartboard, students could write their results on the board. Alternatively, if you have enough small whiteboards to give to each group, they can put their results on the boards and hold them up. Finally, if materials are lacking, students could make a mini poster on simple white paper.
* As described by the the authors of the original laboratory in their teacher notes (above), a possible extension to explore in your class discussion would be the importance of transport in dialysis treatments.