

PHOTOSYNTHESIS LAB BENCH VIRTUAL LAB

INTRODUCTION: Complete the following questions using the website:

http://phschool.com/science/biology_place/labbench/lab4/intro.html

Once you have navigated to the website, go through the screens by clicking the “next” button. Please note that you may have to view some of the provided animations to answer the questions.

1. What do we use paper chromatography for?
2. What is a pigment?
3. Which pigment went the farthest on the virtual Pigment Separation? Which pigment barely moved?
4. What is meant by the term Reference Front?
5. Using the formula below, calculate Reference Front: $R_f = \frac{\text{distance pigment migrated}}{\text{distance solvent front migrated}}$
6. What is the chemical DPIP used for in the experiment?
7. When light strikes the _____, the DPIP is reduced by the _____ from the chlorophyll, and it changes from its blue color to _____.
8. What is a spectrophotometer? What does it measure?
9. What happens to the color of the DPIP solution as the electrons become excited?
10. Why do we use the “blank” to calibrate the machine?

In the experiment, we take three test tubes. One test tube has boiled chloroplast in the solution, one has unboiled chloroplast, and one has unboiled chloroplast but is covered in foil. We shine light on the test tube in order to try to activate the chloroplast. You then measure how much DPIP has reacted every 5 minutes

1. What do you think your results would be? Explain what you think happens in each test tube.