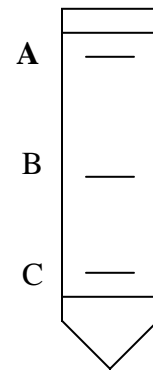


**Prelab for Lab 4: Plant Pigments and Photosynthesis****Plant Pigments:**

1. What factors determine the  $R_f$  value of pigments?
2. Determine the  $R_f$  value of pigments A and B at the right. (Show work.)

$R_f$  value of A: \_\_\_\_\_

$R_f$  value of B: \_\_\_\_\_

**Photosynthesis**

1. Explain why DPIP changes from blue to colorless. Be specific-“it is oxidized” or “it is reduced” is not a sufficient answer.
2. What compound does DPIP replace in the light reaction of photosynthesis? \_\_\_\_\_  
What is the role of that compound in photosynthesis?
3. What does the spectrophotometer measure?
4. What is a cuvette? How should cuvettes be handled? How should they be inserted into the spectrophotometer?
5. How is your blank cuvette different from your other cuvettes? Why is a blank needed?
6. Which cuvette is the control? \_\_\_\_\_
7. What do you expect to happen to the percent transmittance of the unboiled chloroplast suspension over the course of the experiment? Explain why.
8. What do you expect for the boiled chloroplasts? Why?