FLINN SCIENTIFIC

Membrane Properties Worksheet

Data Table

Solution	Absorbance
Distilled water	
Ethyl alcohol, 10%	
Ethyl alcohol, 20%	
Ethyl alcohol, 30%	
Ethyl alcohol, 40%	
n-propyl alcohol, 20%	
Unknown	

Post-Lab Questions

1. Describe the qualitative and quantitative evidence that the beet membrane has been damaged by alcohol.

2. Review the data table. At what concentration did the ethyl alcohol begin to damage the membrane?

3. Create a graph comparing the absorbance versus concentration of ethyl alcohol solution.

4. Based upon the curve created in the graph and the absorbance of the unknown, predict the concentration of ethyl alcohol in the unknown solution.

5. Compare the absorbance of the 20% ethyl alcohol beet solution (a two-carbon molecule) to the 20% *n*-propyl alcohol (a three-carbon molecule). Suggest a possible explanation for the different results and what tests could be done to confirm this hypothesis.

6. Design an experiment for testing the properties of the cell membrane using another variable.