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Science for the Hearing Impaired

Table 3
Effect of Carbon Chain Length

Substance	Concentration	Hemolysis
Ethanol	*0.3 M*	*Complete in 28 sec.*
Propanol	*0.3 M*	*Complete in 10 sec.*
Butanol	*0.3 M*	*Instantaneously*

Discussion

Once interested, students may be guided to answer questions such as:

How much salt is in a red blood cell?
How does the size of a molecule effect osmosis and why?
Is there a difference between the use of organic and inorganic salts?
What is the effect of increasing the carbon chain length?
How much of a chemical imbalance can a cell tolerate?
Does the type of chemical substance used effect the answer to the previous question?
Do electrolytes cause osmosis to occur more rapidly?
What can you say about the selectivity of the membrane based on the materials used here?

Summary

As long as all reagents are of good quality and solutions accurately made, this series of experiments can provide consistent results and generate discussion of the data collected. If little advanced information is given to the students on the expected outcome of the experiments, the discussion should prove thought provoking. I have listed only a few of the possible questions to be explored in an exercise of this type. I am sure that teachers will develop others, not to mention those posed by students.

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Science for the Hearing Impaired

Science for the Hearing Impaired, SFHI, is a science program designed for the needs of the middle childhood-early adolescent hearing impaired student. This program has adapted materials and procedures demonstrated as effective for middle childhood grade levels from existing effective commercially produced science texts. *SFHI* is field tested and in place in many schools nationwide. It includes a full range of materials from teachers guides to signed vocabulary videotapes. Sample guides and copies of the complete curriculum may be obtained from: Dennis and Cynthia Sunal, 604 Allen Hall, West Virginia University, Morgantown, West Virginia 25606.