

## Activity 29: Electrolytes, Nonelectrolytes, and Weak Electrolytes

### *Learning Objective*

*Distinguish electrolytes, nonelectrolytes, and weak electrolytes and their characteristics*

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**Estimated Completion Time**      20–30 Minutes

### **Instructor Information**

A demonstration of tap water versus distilled water with a simple conductivity apparatus works well as a demonstration with this activity to reinforce the concept. Depending on geographic location and apparatus, some tap waters will conduct more than others.

### **ANSWERS TO QUESTIONS**

1.
  - a. Yes. Tap water contains dissolved ions that have ionic charges present.
  - b. No. There are only partial charges (dipoles) in pure water (at this point students have not been introduced to autoionization of water).
2.
  - a. Dissociate; strong electrolyte
  - b. Not dissociate; nonelectrolyte
  - c. Partially dissociate; weak electrolyte

### **Activity 29: Skill Development**

1.
  - a. Dissociate
  - b. Not dissociate
  - c. Partially dissociate
2.
  - a. Partially dissociate; weak electrolyte
  - b. Not dissociate; nonelectrolyte
  - c. Dissociate; strong electrolyte