

Gel Electrophoresis

Gel Electrophoresis Demonstration #1

Water vs saltwater: Does pure water conduct electricity?

Safety note: Be sure the power is turned off and the electrodes are removed from the power source before opening the chamber lids!!

Materials

gel electrophoresis chambers
power sources
distilled water
salt

Procedures

1. Set up the gel chamber.
2. Fill it with **distilled** water.
3. Connect it to the power source and turn on the power.
4. Make observations and record them in your lab notebook in a table similar to the one below.

Chamber filled with distilled water only	Chamber filled with distilled water AND salt

5. Turn off power.
6. Add 5 g (or 1 teaspoon) of salt to the water.
7. Stir gently. Turn on the power.
8. Make observations and record them in your lab notebook.

Conclusions

1. What is the answer to your original research question?
2. What are signs that electricity is being conducted?

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Teacher Notes:

1. *When gel electrophoresis chambers are conducting electricity, bubbles will form on the electrode wires. One side will bubble more than the other. Distilled water will NOT conduct electricity and no bubbles will form. Make sure chambers have been rinsed and do not contain buffer from previous labs.*
2. *It is NOT necessary to use trays in the chambers for this lab.*