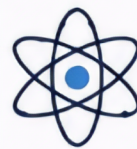




SCIENCE EXPERIMENT LAB SHEET

Testing the Electrical Conductivity of Different Solutions



Name: _____ Date: _____

PURPOSE

To test and compare the electrical conductivity of different solutions using a simple conductivity tester.

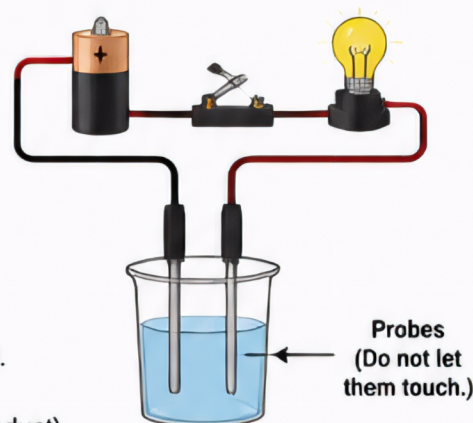
MATERIALS

- Conductivity tester (battery, light bulb/LED, wires, switch, electrode probes)
- 6 clear cups or beakers
- Distilled water
- Table salt (NaCl)
- Baking soda (NaHCO_3)
- Sugar
- Vinegar
- Lemon juice
- Stirring spoon
- Labels and worksheet

PROCEDURE

1. Label six cups: Distilled Water, Salt Solution, Baking Soda Solution, Sugar Solution, Vinegar, Lemon Juice.
2. Prepare the solutions:
 - Distilled Water: use as is.
 - Salt Solution: add 1 teaspoon of table salt to 100 mL of distilled water. Stir until dissolved.
 - Baking Soda Solution: add 1 teaspoon of baking soda to 100 mL of distilled water. Stir until dissolved.
 - Sugar Solution: add 1 teaspoon of sugar to 100 mL of distilled water. Stir until dissolved.
 - Vinegar: use as is.
 - Lemon Juice: use as is.
3. Assemble the conductivity tester. Make sure the bulb/LED and probes are connected.
4. Place the probes into the first solution. Do not let the probes touch each other.
5. Observe whether the light turns ON (conducts electricity) or stays OFF (does not conduct).
6. Rinse the probes with distilled water and wipe dry between each test.
7. Test each of the remaining solutions and record your observations in the table below.

Simple Conductivity Tester



RESULTS

Solution	Did the Light Turn On? (Yes / No)	Conductivity (Strong / Weak / None)	Notes / Observations
Distilled Water			
Salt Solution			
Baking Soda Solution			
Sugar Solution			
Vinegar			
Lemon Juice			

ANALYSIS QUESTIONS

1. Which solution was the best conductor of electricity? _____
2. Which solutions did not conduct electricity? _____
3. Why do you think some solutions conducted electricity while others did not? _____

4. How might the amount of dissolved substance affect conductivity? _____



SAFETY REMINDER: Do not drink any solutions used in this experiment. Wash your hands after the experiment.