

Separating a Solution

Once a solute is dissolved in water, can you get it all back again? In this investigation, you will make a salt-and-water solution using measured quantities of salt and water. Next, you will plan and perform your own procedure to reclaim the salt from the mixture. You will determine whether the quantity of solute changes after it dissolves into a solution.

SKILLS MENU

- | | |
|---|---|
| <input type="checkbox"/> Questioning | <input checked="" type="checkbox"/> Performing |
| <input checked="" type="checkbox"/> Hypothesizing | <input checked="" type="checkbox"/> Observing |
| <input checked="" type="checkbox"/> Predicting | <input checked="" type="checkbox"/> Analyzing |
| <input checked="" type="checkbox"/> Planning | <input checked="" type="checkbox"/> Evaluating |
| <input type="checkbox"/> Controlling Variables | <input checked="" type="checkbox"/> Communicating |

Testable Question

How is the quantity of salt affected when the salt is reclaimed from a salt-and-water solution?

Hypothesis/Prediction

Make a hypothesis based on the Testable Question. Your hypothesis should include a prediction and a reason for your prediction based on the particle theory.

Experimental Design

In this investigation, you will plan your own procedure to reclaim the salt in a solution made of 5 g of salt and 100 mL of warm water. You will compare the mass of the salt before and after to determine whether or not the amount of salt changes during the investigation.

Equipment and Materials

- | | |
|----------------------|----------------------------------|
| • eye protection | • stirring rod |
| • apron | • hot plate |
| • oven mitts | • wire gauze with ceramic centre |
| • balance | • salt |
| • weighing papers | • warm water |
| • large beaker | |
| • graduated cylinder | |



eye protection



apron



oven mitts



balance



weighing papers



large beaker



graduated cylinder



stirring rod



hot plate



wire gauze with ceramic centre



salt



warm water