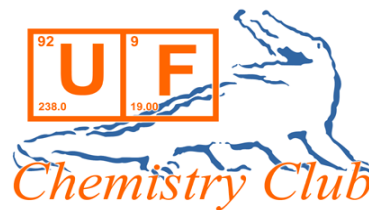


University of Florida Chemistry Outreach Program

Snow Globe Lab



Estimated Time: 30 mins. + 15 mins. clean-up

Topics: Solubility

Introduction: In this lab, you will be making a snow globe using a jar you've brought from home, a small item of interest to you, and some common chemicals we have around the lab.

The chemicals you use in your snow globe to make the snow are entirely up to you. You may use any of the chemicals provided in any combination. Here are some guidelines:

- “Like dissolves like”
- Undissolved solutes falls to the bottom of a saturated solution
- Snow globes should be pretty!

Objective: Understanding the solubility properties of particular solvents and solutes.

Materials:

-Water	-sucrose
-Mineral oil	-talcum powder
-Vegetable oil	-sand
-Sodium chloride	-sodium bicarbonate
-Epsom salt	-Vials and corks
- Hot glue gun	-Alcohol
-Jar	

Safety: - NO eating or drinking in the lab.

Procedure:

1. Using the solutes and solvents at your disposal, create a snow globe.

Discussion:

1. What is a saturated solution?
 2. What does the phrase “Like dissolves like” mean?
 3. What is the best solute/solvent combination?
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1. *Saturation is the point at which a solution of a substance can dissolve no more of that substance and additional amounts of that substance will appear as a precipitate.*
 2. *The phrase “like dissolves like” means substance with the same physical chemistry, such as polarity, dissolves in one another. An example of like dissolves like is water and oil. Water is polar and oil is nonpolar, therefore they do not mix.*
 3. *The best solute/solvent combinations are any nonpolar solvent (such as mineral oil or vegetable oil) and polar solutes (such as Epsom salt or sodium chloride).*

Source: Haugh, Thomas. 2001. Snow Globe Science. *The Science Teacher* 69(3): 36-39