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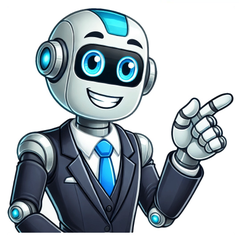

Solubility experiment procedure

Looking at compound solubility, there isn't a single best solvent for every substance. When selecting a solvent, changes in system conditions can significantly impact a compound's properties. Uncharged compounds tend to dissolve better in solvents with lower dielectric constants, but if the compound has polar groups or dipoles, protic solvents or those with dipoles are more suitable. For charged compounds, solvents with higher dielectric constants, protic solvents, and those possessing a dipole are better options. However, developing a universal theory for solubility of charged compounds is challenging due to the importance of interactions between solute-solvent and solvent-solvent in protic and dipolar solvents, which change with concentration variations. The solubility of several compounds will be discussed in different types of solvents. One liquid that can be seen through includes dish soap, canola oil, rubbing alcohol, clear soda, etc. For the experiment, cups (clear is best), measuring cups/spoons, stirrers, various powders, Epsom salt, table salt, table sugar, other sweeteners like Stevia, powdered chalk, baking soda, corn starch, spices, and Jello mix were used. Powdered compounds were added to cups with 1/2 cup of water, then 1 teaspoon was added at a time until it didn’t dissolve anymore. Record observations and continue adding the powder slowly until it no longer dissolved. Repeat for all powdered compounds. Then, wash out cups or get new ones and fill them with 1/2 cup of another liquid (solvent), add 1 teaspoon of a powdered compound, stir carefully, and observe. Keep track of how much was added. This experiment allowed the testing of various solvents and powders. To be more scientific, temperatures could be recorded and measurements taken by weight (grams) instead of using teaspoons. To investigate the solubility of various substances, select several powders to test. You can record observations by creating a table for your data. The experiment involves using different liquids such as water and other transparent liquids like dish soap or rubbing alcohol. Materials needed include small cups, measuring tools, stirrers, various powders (including Epsom salt, table salt, sugar, chalk, baking soda, cornstarch, spices, and powdered Jell-O mix), a thermometer, and a scale. Follow the instructions carefully to ensure accurate results. Begin by labeling three cups for each powder tested and filling them with 1/2 cup of water. Add 1 teaspoon of powder and stir gently; observe if it dissolves completely. Continue adding the powder in 0.5-teaspoon increments until it no longer dissolves. Record the amount added for each substance. Repeat this process using different liquids as solvents, selecting one powdered compound to test with each solvent. Take note of how much powder is required for dissolution and any observations made during the experiment. After completing the tests, wash and clean your workspace, ensuring all materials can be disposed of safely in the trash or down the kitchen sink. To enhance data accuracy, consider using weight measurements (in grams) instead of teaspoons and recording temperatures for both water and other liquids. Finally, compile a table to compare solubility results, making conclusions based on your knowledge of solubility principles and explaining why you think the outcomes occurred as they did.

Solubility study procedure. Solubility experment. Solubility test procedure. Experiments for solubility. Solubility experimental methods.