

CP Chemistry
Solubility Worksheet

Use the graph to answer the following questions.

1. What relationship exists between solubility and temperature for most of the substances on the graph?
2. What are the exceptions and what general principle might account for them?
3. How many grams of NH_4Cl will dissolve in 1 liter of water at 50°C ?
4. If 90 grams of NaNO_3 is added to 100 g of water and stirred, to what temperature must the mixture be raised to dissolve all of the solute?
5. A saturated solution of KClO_3 was made with 300 g of water at 40 degrees. If the solution were evaporated to dryness, how much KClO_3 could be recovered?
6. A saturated solution of KNO_3 in 200 g of water at 50°C is cooled to 20 degrees. How much KNO_3 will precipitate out of solution?
7. What is the smallest mass of water required to completely dissolve 23 g of NH_4Cl at 40°C ?
8. Which salt has solubility values that are least affected by temperature changes?
9. At what temperature do potassium chlorate and potassium chloride have the same solubility in water?
10. Which compound is least soluble in water at 12°C ?
11. A saturated solution of which compound contains 130 g of solute per 100 g water at 70°C ?
12. How many grams of sodium chloride are required to saturate 500 g of water at 100°C ?
13.
 - a. Approximately how many grams of NaNO_3 will dissolve in 1 liter of H_2O at 50°C ?
 - b. How many grams will dissolve at 60°C ?
14. How many grams of NaNO_3 are required to saturate 200 grams of water at 10°C ?
15. If 50 grams of water saturated with potassium chlorate at 23°C is slowly evaporated to dryness, how many grams of the dry salt will be recovered?

