

SOLUBILITY CURVES

Use the attached graph to answer the following questions. Please note that the density of water is 1.0 g/mL.

1. What relationship exists between solubility and temperature for most of the substances below? What is the exception?
2. How many grams of NaNO_3 will dissolve in 100 g of water at 20°C ? _____
3. How many grams will dissolve at 60°C ? _____
4. How many grams of NH_4Cl will dissolve in 1 liter of H_2O at 50°C ?
5. 90 grams of NaNO_3 is added to 100 g of H_2O at 0°C . With constant stirring, to what temperature must the solution be raised to produce a saturated solution with no NaNO_3 remaining?
6. A saturated solution of KClO_3 was made with 300 g of H_2O at 40°C . How much KClO_3 could be recovered by evaporating the solution to dryness?
7. 500 grams of water are used to make a saturated solution of KCl at 10°C . How many more grams of KCl could be dissolved if the temperature were raised to 100°C ?
8. A saturated solution of KNO_3 in 200 g of H_2O at 50°C is cooled to 20°C . How much KNO_3 will precipitate out of solution?

Solubilities of Common Chemicals

(solubility curves)

