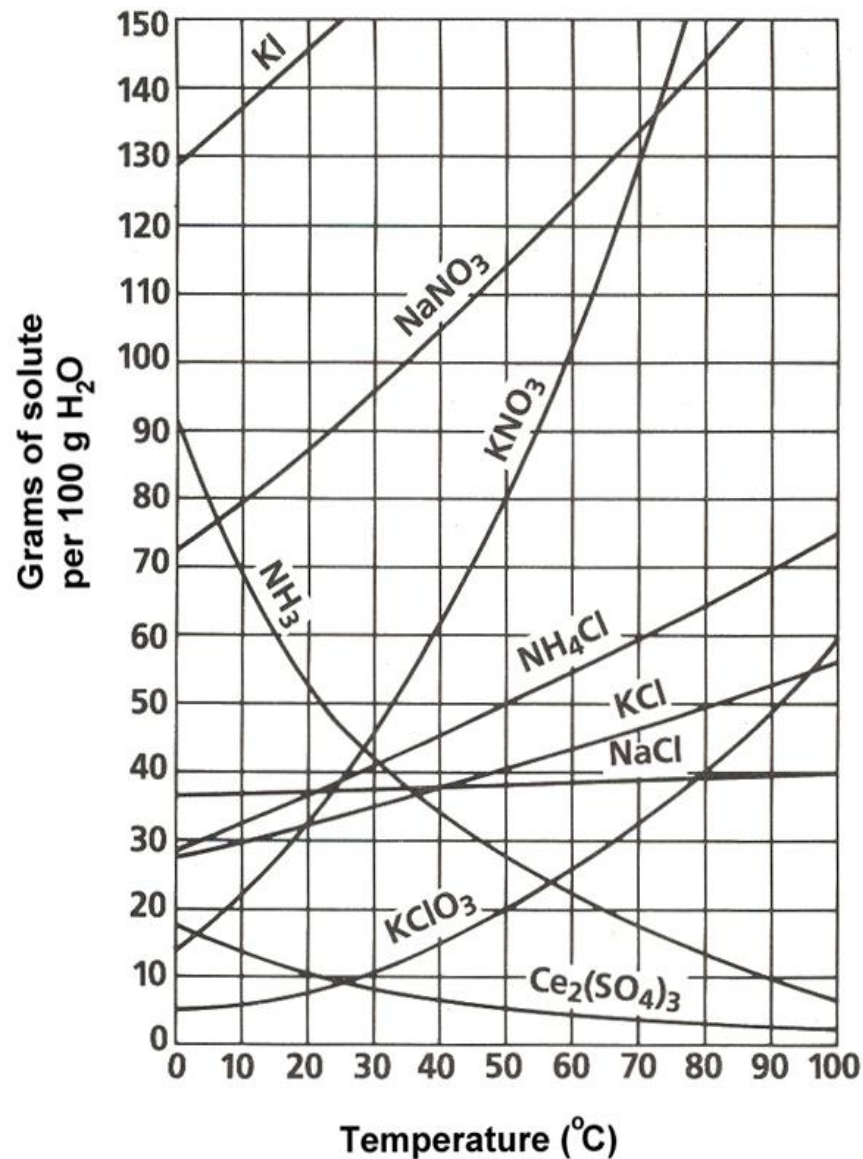


Chemistry I
Unit #11—Solutions

Solubility Curves

1. How many grams can be dissolved of KCl at 5°C?
2. How many grams can be dissolved of NH₃ at 25°C?
3. How many grams can be dissolved of KI at 10°C?
4. How many grams can be dissolved of Ce₂(SO₄)₃ at 50°C?
5. How many grams can be dissolved of NH₄Cl at 90°C?
6. At 90°C, you dissolved 10 g of KCl in 100. g of water. Is this solution saturated or unsaturated?
7. A mass of 100 g of NaNO₃ is dissolved in 100 g of water at 80°C. Is the solution saturated or unsaturated?
8. Which compound is the most soluble at 20 °C?
9. Which compound is the least soluble at 40 °C?
10. Which substance on the graph is the **most** soluble at 10°C?
11. Which substance on the graph is **least** soluble at 10°C?



- Which of the salts shown on the graph is the least soluble in water at 10°C? Is the solution unsaturated, saturated, or supersaturated 10°C?
- Which of the salts shown on the graph has the greatest increase in solubility as the temperature increases from 30 degrees to 60 degrees?
- Which of the salts has its solubility affected the least by a change in temperature?
- At 20°C, a solution of sodium nitrate contains 100 grams of solute in 100 ml of water. Is the solution unsaturated, saturated, or supersaturated?
- How many grams of potassium chlorate must be added to 1 liter of water to produce a saturated solution at 50°C?
- Thirty grams of KCl are dissolved in 100 mL of water at 45°C. Is the solution unsaturated, saturated, or supersaturated?
- Are the following solutions saturated, unsaturated or supersaturated
 40. g of KCl in 100 mL of water at 80°C
 120. g of KNO₃ in 100 mL of water at 60°C
 80. g of NaNO₃ in 100 mL of water at 10°C

