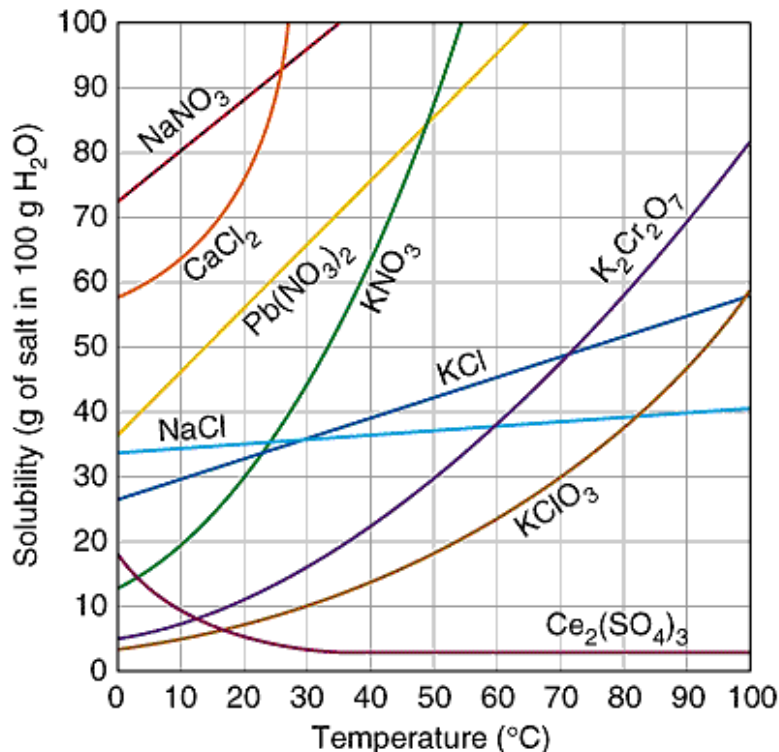


## U6 Solutions Assignment 1



**Solubility Curves:** Using the graph, answer the following questions

- Which substance does not greatly increase in solubility as the temperature is increased?
- Which substance decreases in solubility as the temperature is increased?
- Which substance increases most in solubility as the temperature is increased?
- Which substance is most soluble at 0 °C?
- Which substance is least soluble at 0 °C?
- Which two substances have the same solubility at 71 °C?
- What is the most KNO<sub>3</sub> that can be dissolved at 50 °C?
- What is the most K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> that can be dissolved at 70 °C?
- At 70°C which substance, KCl or K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> can form the more concentrated solution?
- At what temperature would you need 100g of water to dissolve 70g of Pb(NO<sub>3</sub>)<sub>2</sub>?
- At what temperature would you need 100g of water to dissolve 70g of NaCl?
- Which salt is least soluble in water at 20°C?
- How many grams of potassium chloride can be dissolved in 200g of water at 80 °C?
- At 40 °C, how much potassium nitrate can be dissolved in 300g of water?
- Which salt shows the least change in solubility from 0 °C to 100 °C?
- At 30 °C, 90g of sodium nitrate is dissolved in 100g of water. Is the solution saturated, unsaturated or supersaturated?
- A saturated solution of potassium chlorate is formed from one hundred grams of water. If the saturated solution is cooled from 80 °C to 50 °C, how many grams of precipitate are formed?
- What compound shows a decrease in solubility from 0 °C to 100 °C?
- Which salt is most soluble at 10 °C?
- Which salt is least soluble at 50 °C?
- Which salt is least soluble at 90 °C?