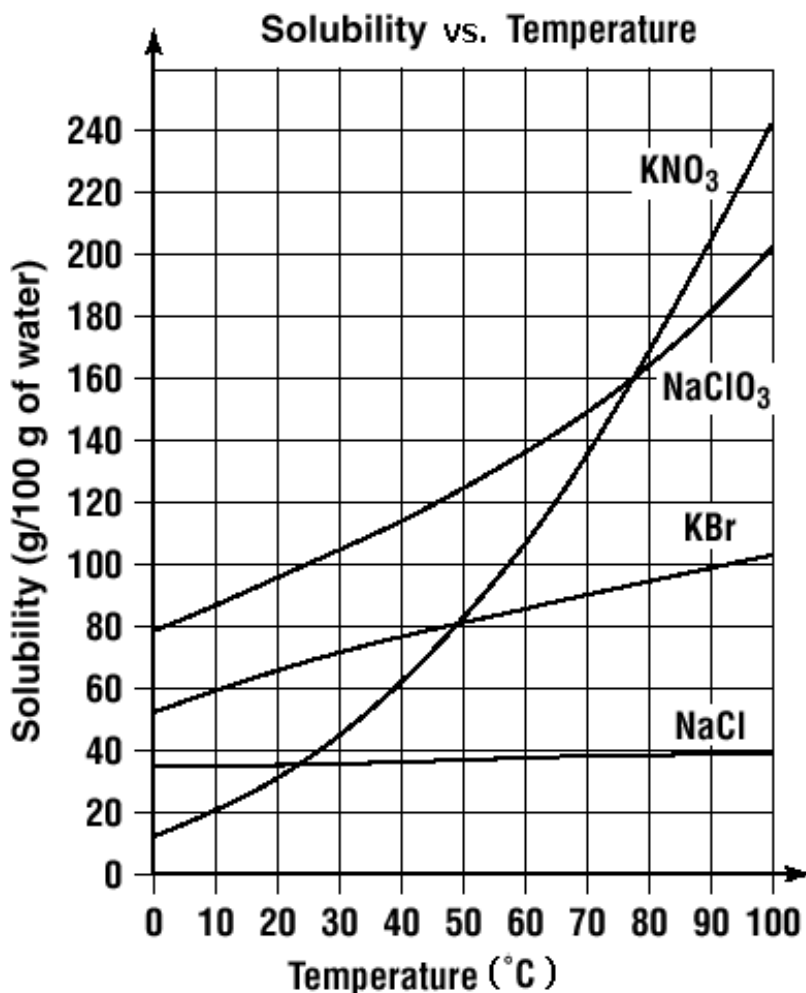


# Solubility

The graph shows how a change in temperature affects the solubility of four common compounds.

- \_\_\_\_\_ 1. An increase in the temperature -?- solubility of NaCl?
  - a. greatly affects the
  - b. has little affect on the
  - c. has no affect on the
- \_\_\_\_\_ 2. An increase in the temperature -?- solubility of KNO<sub>3</sub>?
  - a. greatly affects the
  - b. has little affect on the
  - c. has no affect on the
- \_\_\_\_\_ 3. At what temperature (in °C) does KNO<sub>3</sub> have the same solubility as KBr?
- \_\_\_\_\_ 4. What is the solubility (in g/100 g of H<sub>2</sub>O) of both KNO<sub>3</sub> and KBr at the temperature in #3?
- \_\_\_\_\_ 5. How many grams of KBr are needed to make a saturated solution in 100 g of water at 30°C?
- \_\_\_\_\_ 6. A KBr solution with a concentration of 90 g/100 g of water at 50°C would be considered:
  - a. unsaturated
  - b. saturated
  - c. supersaturated
- \_\_\_\_\_ 7. At what temperature (in °C) is the solubility of NaCl the same as that of KNO<sub>3</sub>?



Use the chart below to add the solubility curve of potassium chloride (KCl) to the graph above and then answer questions #8-12.

Solubility of KCl (g per 100 g of water)				
Temperature	0°C	20°C	60°C	100°C
Solubility	28.0	34.0	46.0	56.0

- \_\_\_\_\_ 8. How many grams of KCl will form a saturated solution in 100 g of water at 60°C?
- \_\_\_\_\_ 9. If 10 g of KCl were placed in 100 g of water at 0° C, what kind of solution would be formed?
  - a. unsaturated
  - b. saturated
  - c. supersaturated
- \_\_\_\_\_ 10. Which is more soluble in water, KCl or KBr?
- \_\_\_\_\_ 11. The solubility of which salt is least affected by temperature?

\_\_\_\_\_ 12. The solubility of which salt is most affected by temperature?  
Match the chemical formula to the proper name:

- a. KNO<sub>3</sub>
- b. NaClO<sub>3</sub>
- c. KBr
- d. NaCl
- e. KCl

\_\_\_\_\_ 13. potassium chloride

\_\_\_\_\_ 14. sodium chloride

\_\_\_\_\_ 15. potassium nitrate

\_\_\_\_\_ 16. potassium bromide

\_\_\_\_\_ 17. sodium chlorate