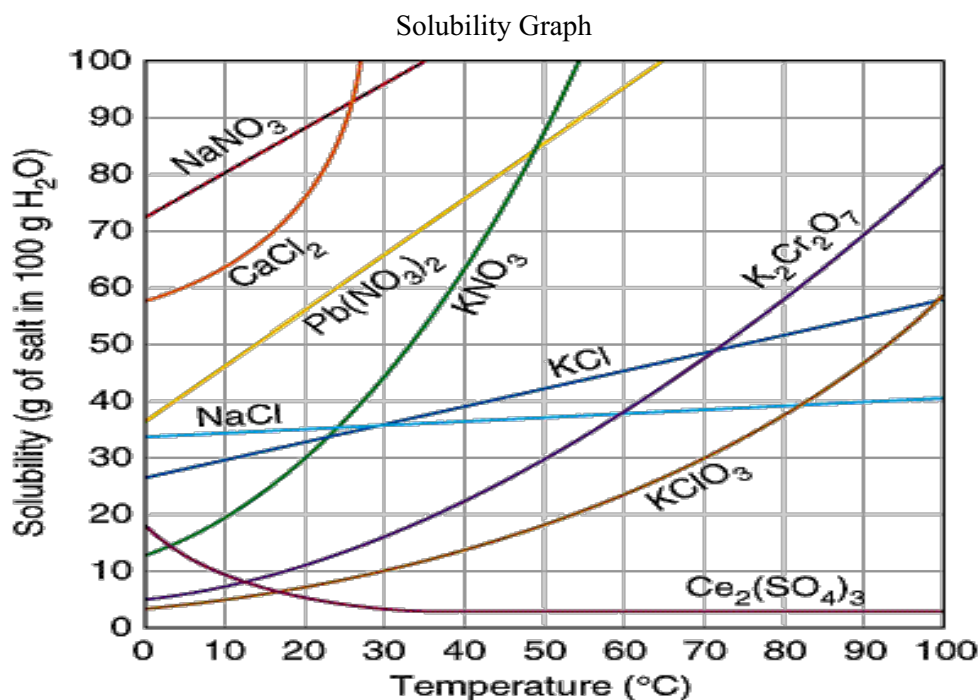


### Ch. 8: Reading Solubility Charts and Graphs



1. How would you classify a solution of 40g of NaCl at 80°C? \_\_\_\_\_
2. At what temperature would you have a saturated solution with 80g of potassium nitrate (KNO<sub>3</sub>)? \_\_\_\_\_
3. How would you classify a solution of 100g of sodium nitrate (NaNO<sub>3</sub>) at 40°C? \_\_\_\_\_
4. How would you classify a solution of 100g of potassium chromate (K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>) at 90°C? \_\_\_\_\_
5. How would you classify a solution of 100g of potassium nitrate (KNO<sub>3</sub>) at 50°C? \_\_\_\_\_
6. Which compound on this graph shows the **most** change in solubility from 0°C - 100°C? \_\_\_\_\_
7. Which of the compounds shows the **least** change? \_\_\_\_\_
8. Which of the compounds on this graph is the least soluble at 0°C? \_\_\_\_\_
9. Which of the compounds is the most soluble at 100°C? \_\_\_\_\_

### Solubility of Compounds in g/100g of Water at various Temperatures

| Compound            | 0° C | 20° C | 60° C | 100° C |
|---------------------|------|-------|-------|--------|
| Ammonium chloride   | 29.4 | 37.2  | 55.3  | 77.3   |
| Copper (II) sulfate | 23.1 | 32.0  | 61.8  | 114    |
| Lead (II) chloride  | 0.67 | 1.0   | 1.94  | 3.2    |
| Potassium bromide   | 53.6 | 65.3  | 85.5  | 104    |
| Potassium chloride  | 28.0 | 34.0  | 45.8  | 56.3   |
| Sodium acetate      | 36.2 | 46.4  | 139   | 170.15 |
| Sodium chlorate     | 79.6 | 95.9  | 137   | 204    |

1. At 50° C how would you classify a solution of 58.2g of ammonium chloride? \_\_\_\_\_
2. How much sodium acetate would dissolve in 200g of water at 60° C? \_\_\_\_\_
3. Which of the compounds listed above is the least soluble in water at 0° C? \_\_\_\_\_
4. How would you classify a solution of 46.3g of sodium acetate at 20° C? \_\_\_\_\_
5. Which of the compounds above shows the least change in solubility from 0° C - 100°C? \_\_\_\_\_
6. Which shows the most change? \_\_\_\_\_
7. Which of the above compounds is the most soluble at 100° C? \_\_\_\_\_
8. How many grams of potassium bromide will it take to form a saturated solution in 300g of water at 100° C?  
\_\_\_\_\_
9. How many grams of sodium chlorate will it take to form a saturated solution in 200g of water at 60° C?  
\_\_\_\_\_
10. How much ammonium chloride would dissolve in 300g of water at 0° C? \_\_\_\_\_