Name : ---------- Date : ----------

# Introduction to Solubility Curve

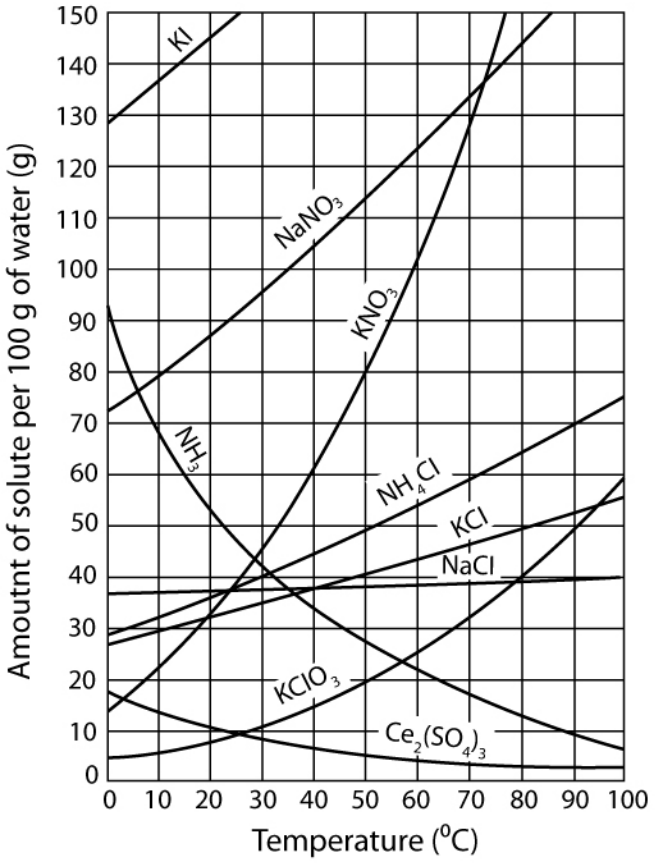
**Part A:** Define the following:

a. Saturated solution:

b. Unsaturated solution:

c. Supersaturated solution:

**Part B:** Using the curve given below, answer the given questions.




a. 100 mL of saturated solutions of the following salts are prepared at 20°C. Determine the amount of salt used for the following:

1. Sodium chloride (NaCl): _____
2. Potassium chloride (KCl): _____
3. Potassium nitrate ($KNO_3$): _____
4. Sodium nitrate ($NaNO_3$): _____

b. 100 mL of saturated solutions of the following salts are prepared at 40°C. Determine the amount of salt used for the following:

1. Potassium chloride (KCl): _____
2. Potassium nitrate ($KNO_3$): _____
3. Potassium chlorate ($KClO_3$): _____
4. Sodium nitrate ($NaNO_3$): _____

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# Introduction to Solubility Curve

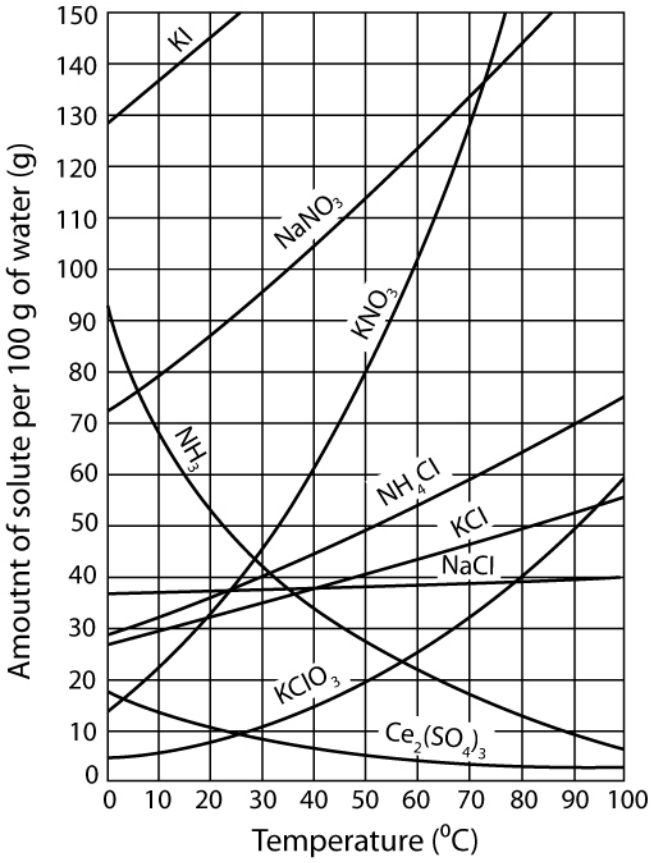
**Part A:** Define the following: Answers

a. Saturated solution: the exact maximum of solute is dissolved at the given temperature (can't dissolve more).

b. Unsaturated solution: less than the maximum amount of solute is dissolved (can still dissolve more).

c. Supersaturated solution: more solute is dissolved than what should be possible

**Part B:** Using the curve given below, answer the given questions.




a. 100 mL of saturated solutions of the following salts are prepared at 20°C. Determine the amount of salt used for the following:

1. Sodium chloride (NaCl): 37 g
2. Potassium chloride (KCl): 33 g
3. Potassium nitrate ($KNO_3$): 33 g
4. Sodium nitrate ($NaNO_3$): 85 g

b. 100 mL of saturated solutions of the following salts are prepared at 40°C. Determine the amount of salt used for the following:

1. Potassium chloride (KCl): 38 g
2. Potassium nitrate ($KNO_3$): 65 g
3. Potassium chlorate ($KClO_3$): 17 g
4. Sodium nitrate ($NaNO_3$): 103 g