Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chem R Pd. \_\_\_\_ Table G Practice

Determine the **type of solution** (unsaturated, saturated, supersaturated) produced.

1) 10 g of NH3 dissolved in 100 g of water at 90⁰C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) 30 g of NH4Cl dissolved in 100 g of water at 40⁰C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) 105 g of KNO3 dissolved in 100 g of water at 50⁰C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) 5 g of NaCl dissolved in 100 g of water at 0⁰C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) 51 g of KCl dissolved in 100 g of water at 80⁰C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Ex 1) How much HCl should be dissolved in **100 g of water** to make a saturated solution at 30⁰C?

 Ex 2) How much HCl should be dissolved in **50 g of water** to make a saturated solution at 30⁰C?

 Ex 3) How much HCl should be dissolved in **200 g of water** to make a saturated solution at 30⁰C?

1) How much KClO3 should be dissolved in 50 g of water at 40⁰C to make a saturated solution? \_\_\_\_\_\_\_\_

2) How much NaCl should be dissolved in 200 g of water at 90⁰C to make a saturated solution? \_\_\_\_\_\_\_\_

3) How much KNO3 should be dissolved in 50 g of water at 60⁰C to make a saturated solution? \_\_\_\_\_\_\_\_

4) How much KCl should be dissolved in 200 g of water at 50⁰C to make a saturated solution? \_\_\_\_\_\_\_\_

 Ex 1) A solution of NaNO3 at 30⁰C is saturated. How much salt **will precipitate out** if the solution is cooled to 10⁰C?

 Ex 2) A solution of KI at 20⁰C is saturated. How much salt **will precipitate out** if the solution is cooled to 10⁰C?

1) A solution of NaCl at 90⁰C is saturated. How much salt will precipitate out if the solution is cooled to 0⁰C?

2) A solution of NaNO3 at 50⁰C is saturated. How much salt will precipitate out if the solution is cooled to 30⁰C?

3) A solution of KClO3 at 80⁰C is saturated. How much salt will precipitate out if the solution is cooled to 30⁰C?

4) A solution of NH4Cl at 10⁰C is saturated. How much salt will precipitate out if the solution is cooled to 0⁰C?

 Ex 1) If 100 g of KI are dissolved in 100 g of water at 20⁰C, **how much more** KI would need to be added to make a saturated solution?

 Ex 2) If 20 g of NaCl are dissolved in 100 g of water at 100⁰C, **how much more** NaCl would need to be added to make a saturated solution?

1) If 5 g of SO2 are dissolved in 100 g of water at 10⁰C, how much more SO2 would need to be added to make a saturated solution?

2) If 30 g of NH4Cl are dissolved in 100 g of water at 80⁰C, how much more NH4Clwould need to be added to make a saturated solution?

3) If 80 g of KNO3 are dissolved in 100 g of water at 60⁰C, how much more KNO3 would need to be added to make a saturated solution?

4) If 20 g of HCl are dissolved in 100 g of water at 90⁰C, how much more HCl would need to be added to make a saturated solution?

**General Understanding of Table G Questions**

1) The graph below represents four solubility curves. Which curve best represents the solubility of a gas in water?

 (1) A (3) C

 (2) B (4) D

2) Which salt has the greatest change in solubility between 30⁰C and 50⁰C?

 (1) KNO3 (2) KCl (3) NaNO3 (4) NaCl

3) Based on Reference Table G, which of the following substances is most soluble at 50⁰C?

 (1) KClO3 (2) NH3 (3) NaCl (4) NH4Cl

4) According to Reference Table G, which of the following substances is least soluble in 100 grams of water at 50⁰C?

 (1) NaCl (2) KCl (3) NH4Cl (4) HCl

5) Solubility data for four different salts in water at 60⁰C are shown in the table below. Which salt is most soluble at 60⁰C?

 (1) A (2) B (3) C (4) D