Chemistry 115 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Cary Willard

Quiz 9a (20 points) December 1, 2009

1. (5 points) Name and distinguish between the two components of a solution.
2. (5 points) In 35.0 g of a 9.45% by mass solution of CaSO4 in water, how many grams of calcium sulfate are present? How many grams of water are present?
3. (5 points) Calculate the molarity of a solution prepared by dissolving 48.2 grams of potassium nitrate, KNO3, in enough water to make 250.0 mL of solution.
4. (5 point) Using the equation below, calculate the volume of a 2.43 M solution of calcium nitrate is required to react completely with 58.4 mL of a 7.04 M solution of sodium phosphate.

3 Ca(NO3)2(aq) + 2 Na3PO4(aq) 🡪 Ca3(PO4)2(s) + 6 NaNO3(aq)

Chemistry 115 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Cary Willard

Quiz 9b (20 points) December 1, 2009

1. (5 points) Name and distinguish between the two components of a solution.
2. (5 points) In 55.0 g of a 9.45% by mass solution of CaSO4 in water, how many grams of calcium sulfate are present? How many grams of water are present?
3. (5 points) Calculate the molarity of a solution prepared by dissolving 61.5 grams of potassium nitrate, KNO3, in enough water to make 250.0 mL of solution.
4. (5 point) Using the equation below, calculate the volume of a 6.88 M solution of calcium nitrate is required to react completely with 58.4 mL of a 7.04 M solution of sodium phosphate.

3 Ca(NO3)2(aq) + 2 Na3PO4(aq) 🡪 Ca3(PO4)2(s) + 6 NaNO3(aq)

Chemistry 115 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Cary Willard

Quiz 9c (20 points) December 2, 2009

1. (5 points) In a saturated solution containing undissolved solute, solute is continuously dissolving, but the concentration of the solution remains unchanged. Explain.
2. (5 points) Calculate the mass percent of K2C2O4 in a solution composed of 42.8 g of potassium oxalate dissolved in 350.0 g of water.
3. (5 points) Calculate the mass of solute in grams in 844 mL of a 3.22 M solution of barium sulfate, BaSO4.
4. (5 point) Using the equation below, calculate the volume of a 1.29 M solution of sodium phosphate is required to react completely with 61.2 mL of a 3.44 M solution of calcium nitrate.

3 Ca(NO3)2(aq) + 2 Na3PO4(aq) 🡪 Ca3(PO4)2(s) + 6 NaNO3(aq)

Chemistry 115 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Cary Willard

Quiz 9d(20 points) December 2, 2009

1. (5 points) In a saturated solution containing undissolved solute, solute is continuously dissolving, but the concentration of the solution remains unchanged. Explain.
2. (5 points) Calculate the mass percent of K2C2O4 in a solution composed of 61.5 g of potassium oxalate dissolved in 350.0 g of water.
3. (5 points) Calculate the mass of solute in grams in 533 mL of a 3.22 M solution of barium sulfate, BaSO4.
4. (5 point) Using the equation below, calculate the volume of a 2.66 M solution of sodium phosphate is required to react completely with 61.2 mL of a 3.44 M solution of calcium nitrate.

3 Ca(NO3)2(aq) + 2 Na3PO4(aq) 🡪 Ca3(PO4)2(s) + 6 NaNO3(aq)

Chemistry 115 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Cary Willard

Quiz 9e (20 points) December 3, 2009

1. (5 points) What is the effect of pressure on the solubility of gases in liquids?

Of solids in liquids?

1. (5 points) A chemistry experiment requires 25.2 g of potassium permanganate, KMnO4. How many grams of a 21.6% by mass solution of potassium permanganate should be used?
2. (5 points) How many mL of 0.450 M phosphoric acid, H3PO4, will contain 48.2 grams of phosphoric acid?
3. (5 point) Using the equation below, calculate the volume of a 1.29 M solution of sodium phosphate is required to produce 15.00 g of calcium phosphate?

3 Ca(NO3)2(aq) + 2 Na3PO4(aq) 🡪 Ca3(PO4)2(s) + 6 NaNO3(aq)

Chemistry 115 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Cary Willard

Quiz 9e (20 points) December 3, 2009

1. (5 points) What is the effect of pressure on the solubility of gases in liquids?

Of solids in liquids?

1. (5 points) A chemistry experiment requires 32.9 g of potassium permanganate, KMnO4. How many grams of a 21.6% by mass solution of potassium permanganate should be used?
2. (5 points) How many mL of 0.650 M phosphoric acid, H3PO4, will contain 48.2 grams of phosphoric acid?
3. (5 point) Using the equation below, calculate the volume of a 1.29 M solution of sodium phosphate is required to produce 25.00 g of calcium phosphate?

3 Ca(NO3)2(aq) + 2 Na3PO4(aq) 🡪 Ca3(PO4)2(s) + 6 NaNO3(aq)