Chemistry 141 Name

Dr. Cary Willard

Quiz 3a (20 points) September 11, 2013

Exactly 250.0 mL of 0.1532 M hydrochloric acid was added to a beaker containing 175.0 mL of 0.1044 M lead(II) nitrate. Write and balance the equation for the reaction that occurs. (Remember that lead(II) chloride is insoluble.) Use an IE table to solve the problem.

I

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E

1. Which reactant is limiting?
2. What is the value of x?
3. Determine the mass of PbCl2 produced by the reaction.
4. Determine the number of moles and the concentrations of the following ions in solution

Mol Pb+2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Pb+2] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol H+1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [H+1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol Cl-1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Cl-1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol NO3-1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [NO3-1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine the pH of the final solution.

Chemistry 141 Name

Dr. Cary Willard

Quiz 3b (20 points) September 11, 2013

Exactly 150.0 mL of 0.1532 M hydrochloric acid was added to a beaker containing 175.0 mL of 0.1044 M lead(II) nitrate. Write and balance the equation for the reaction that occurs. (Remember that lead(II) chloride is insoluble.) Use an IE table to solve the problem.

I

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E

1. Which reactant is limiting?
2. What is the value of x?
3. Determine the mass of PbCl2 produced by the reaction.
4. Determine the number of moles and the concentrations of the following ions in solution

Mol Pb+2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Pb+2] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol H+1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [H+1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol Cl-1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Cl-1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mol NO3-1 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [NO3-1] = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Determine the pH of the final solution.