

Week 7

Chem 112 Recitation Exercises

Acids and Bases

1. Calculate the pH of the following solutions:
 - a. 0.015 M KOH
 - b. 0.10 M $\text{C}_6\text{H}_5\text{NH}_2$ (K_b of $\text{C}_6\text{H}_5\text{NH}_2 = 4.3 \times 10^{-10}$)
 - c. 0.10 M H_2SO_4 (K_{a2} of $\text{H}_2\text{SO}_4 = 1.2 \times 10^{-2}$)
 - d. 0.10 M $\text{Na}_2\text{C}_2\text{O}_4$ (K_{a2} of $\text{H}_2\text{C}_2\text{O}_4 = 6.4 \times 10^{-5}$)
 - e. 0.10 M H_2SO_3 ($K_{a1} = 1.5 \times 10^{-2}$, $K_{a2} = 6.3 \times 10^{-8}$)

Qual quiz 1 practice

2. What are the ions in Group 2? Give their colors and formulas (with charges).
3. How are AgCl and PbCl_2 separated? Give the procedural steps and write a net ionic equation for the reaction that occurs.
4. Which metal hydroxides that are formed in the reaction of Soln 2A with excess ammonia are amphoteric? What does amphoteric mean?
5. Explain how you would determine whether or not you had added an excess of NH_3 to Soln 2A.
6. Give all reactions and steps for the confirmatory step for Fe^{3+} . Describe in detail the appearance of the confirmatory product.