

WORKSHEET: AQUEOUS SOLUTION EQUILIBRIUM – part 2

- 40.00 mL of 0.350 M CH_3NH_2 is titrated with 0.280 M HCl until the end point is reached. Calculate the pH of the solution at the end point. Answer: 5.72
- Would you expect a 0.1 M aqueous solution of NaHCO_3 to be acidic, basic, or neutral? Answer: basic
- Tell whether the following solutions would be acidic, basic, or neutral.
 - 0.1 M NH_4ClO Answer: basic
 - 0.1 M NaNO_2 Answer: basic
 - 0.1 M $\text{Ni}(\text{NO}_3)_3$ Answer: acidic
- Would you expect a 0.1 M aqueous solution of Na_2HPO_4 to be acidic, basic, or neutral? Answer: basic
- 30.00 mL of 0.7200 M $\text{C}_6\text{H}_5\text{NH}_2$ is titrated to the end point with 0.2500 M HCl . What is the pH of the solution at the end point? Answer: 2.68
- For each of the following, indicate whether the solution is acidic, basic, or neutral.
 - 0.1 M NH_4CHO_2 Answer: acidic
 - 0.1 M Na_2S Answer: basic
 - 0.1 M $\text{Cr}(\text{NO}_3)_3$ Answer: acidic
- What is the pH of a solution prepared by mixing 25.00 mL of 0.440 M $\text{CH}_3\text{NH}_3\text{Cl}$ with 20.00 mL of 0.299 M NaOH ? Answer: 10.72
- For each of the following, indicate whether the solution is acidic, basic, or neutral.
 - 0.1 M NH_4ClO Answer: basic
 - 0.1 M KCNO Answer: basic
 - 0.1 M $\text{Ni}(\text{ClO}_4)_3$ Answer: acidic
- 27.0 mL of 0.200 M CH_3NH_2 is titrated with 0.350 M HCl . What is the pH at the equivalence point? Answer: 5.77

