

## Acid/Base Titrations Practice

- 1.) A 0.025 L solution of NaOH having an unknown concentration is titrated using 0.125 M HCl. 15.3 mL HCl is needed to reach the equivalence point. What is the [NaOH]?
- 2.) The following titration reaction occurred: 
$$\text{H}_2\text{SO}_4 + \text{LiOH} \rightarrow \text{Li}_2\text{SO}_4 + 2 \text{H}_2\text{O}$$
 0.0282 L of 0.0635 M LiOH was used to titrate 0.0250 L H<sub>2</sub>SO<sub>4</sub>. What is the [H<sub>2</sub>SO<sub>4</sub>]?
- 3.) 0.0500 L of 0.0275 M HCl was fully titrated using 0.0350 M NH<sub>3</sub>. What volume of NH<sub>3</sub> was needed?
- 4.) 0.0287 L of 0.0136 M H<sub>4</sub>P<sub>2</sub>O<sub>7</sub>, pyrophosphoric acid, is fully titrated using 0.0403 L of 0.0387 M KOH. How many protons are removed from the acid, and what is the formula of the acid if the water is removed?
- 5.) A 5.00 g sample of solid, impure C<sub>6</sub>H<sub>5</sub>COOH, is dissolved in 0.250 L water. A 25.00 mL sample is titrated using 31.84 mL of 0.1236 M NaOH. What is the % purity of the acid?