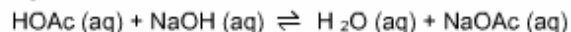


Click anywhere to start the titration simulator when you are ready **About This Weak Acid Strong Base Titration Simulator**

Objective of this exercise #1: To determine the concentration of a 25.0 mL solution of acetic acid (HOAc) by titration using NaOH (aq) as the titrant.

**Instructions:**

1. Enter the concentration of the NaOH solution you want to use in the titration.

Note: You cannot change the NaOH concentration in the middle of the titration.

2. Enter the aliquot volume of the NaOH (aq) you want to add. You can change the aliquot volume any time during the titration.

Tip: To determine the end point accurately, always add smaller aliquots when close to the end point.

3. To add the NaOH(aq) to the acid solution, click and hold down the mouse on the buret.

4. Observe the change in the pH in the graph, and determine the end point.

The solution pH versus the volume of NaOH(aq) added will be recorded.

5. Calculate the concentration of the acid solution. Enter the answer and click on the yellow tab labeled "Turn in lab report" to check your answer.

Additional activity:

Choose one or two values of mL NaOH (aq) added from the list of the titration data, and calculate the pH to see if your calculated pH matches that recorded in the titration data.

Tips:

1. You have only 50 mL of NaOH solution for each trial. If you use up 50 mL before the end point, you can always titrate again.

2. In the first trial, run a fast titration using a little higher concentration of NaOH (aq), e.g. 0.5 to 1.0 M, to get a rough estimate of the end point and the acid concentration. Then, run the titration again using a lower concentration of NaOH -- in the ranges of 0.5 to 2 times of the acid concentration, depending on the acid concentration.

3. You can re-start the titration of the same concentration of acetic acid, or a different concentration any time by clicking on the tabs on the "lab notebook".