

Titration Lab Instructions:

Your lab has been sent a sample of a base called sodium hydroxide (NaOH) from a chemical spill. As a member of the hazmat team in charge of cleanup, your goal is to find the concentration of this base.



SAFETY

You will need to wear appropriate safety equipment at all times and follow lab procedures under the supervision of your instructor.

1. Pour 50 mL of your standard solution of 0.1 molar hydrochloric acid into your buret.
2. Measure 25 mL of the sodium hydroxide of unknown concentration and pour it into your Erlenmeyer flask.
3. Place a magnetic stirring rod in the flask, and place the flask on a magnetic stirrer.
4. Place the ring stand and buret over the flask so the acid in the buret can be added to the flask.
5. Add three drops of phenolphthalein to the flask before you begin the titration.
6. Begin adding acid to the flask by opening the stopcock of the buret while stirring in 1 mL at a time until you begin to see color change that persists.
7. When the color turns light pink, begin adding the acid one drop at a time until the pink completely disappears. Once it does, you have reached the endpoint.
8. Now it is time to determine the volume of acid used in your titration by subtracting the final volume of acid in the buret from the starting volume.
9. Use the volume of the acid that you began with, in this case 50 mL, and your titration equation to determine the molarity of the base.