FIGURE 10 Following is the proper method for carrying out an acid-base titration. To be sure you have an accurate value, you should repeat the titration until you have three results that agree within 0.05 mL. A standardized base solution is used in this procedure to determine the unknown concentration of an acid.

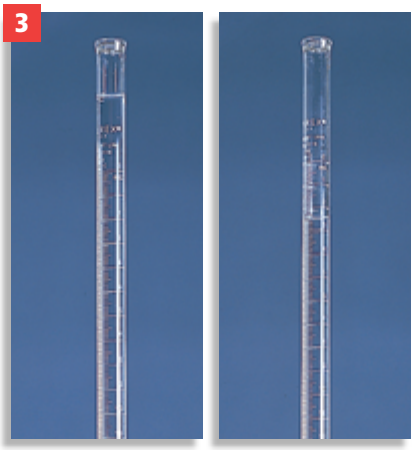
1

First set up two clean burets as shown. Decide which buret to use for the acid and which to use for the base. Rinse the acid buret three times with the acid that will be used in the titration. Then, rinse the base buret with the base solution to be used.

2

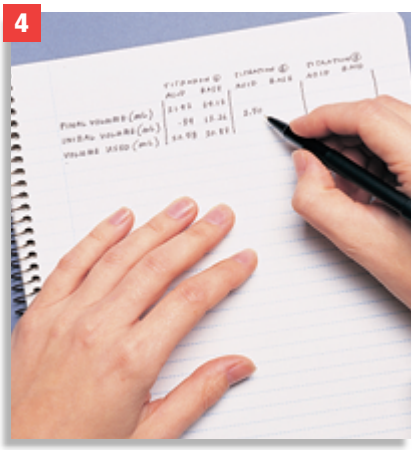
Fill the first buret to a point above the 0 mL calibration mark with the acid of unknown concentration.

3



Release some acid from the buret to remove any air bubbles and to lower the volume to the calibrated portion of the buret.

4

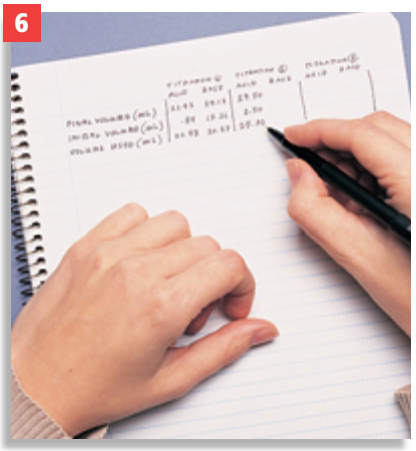


Record the volume of the acid in the buret to the nearest 0.01 mL as the initial volume. Remember to read the volume at the bottom of the meniscus.

5

Allow approximately the volume of acid that was determined by your teacher or lab procedure to flow into a clean Erlenmeyer flask.

6



Subtract the initial volume reading on the buret from the final reading. This is the exact volume of the acid released into the flask. Record it to the nearest 0.01 mL.

7

Add three drops of the appropriate indicator (in this case phenolphthalein) to the flask.