

**What you need to do:**

**Procedure: Tums vs. Alka-Seltzer**

*Choose a partner to complete the testing of both types of antacid.*

1. Select one tablet of the two antacids to be tested and weigh it to the nearest 0.0001g.
2. Using a graduated cylinder, measure out exactly 50 mL of 0.1 M HCl.
3. Add approximately 25 mL of your acid to a beaker containing your antacid tablet and stir.
4. After a few minutes have passed, continue adding the rest of the acid. Slowly and with stirring.
5. After the antacid tablet is completely dissolved and reacted, place the beaker on a hotplate and bring to a boil.
6. Boil the solution for 1-2 minutes to ensure complete reaction. **Do not let the solution boil over!**
7. Remove the beaker containing the solution from the hotplate and allow it to cool.
8. While the solution is cooling, set up your buret.
  - (a) Obtain a buret from the front counter.
  - (b) Rinse the buret with ~5 mL of water.
  - (c) Rinse the buret again but with ~5 mL of 0.1M NaOH.
  - (d) Fill the buret with the 0.1 M NaOH and record the initial volume.
9. To the now cooled beaker of acid, add 3-5 drops of phenolphthalein indicator. If the solution turns pink, add 25 mL more of 0.1M HCl. Be sure to record the addition in your notebook.

You are now ready to start your titration.

10. Add base to acid, adding a little bit at a time, swirling to help the reaction to take place, and for the reactants to meet and react. Do this until the solution begins to turn a pale pink.
11. Record the volume of NaOH you have added at this point.
12. Share your results with your partner and collect their data on the other antacid type.