

Comparing the amount of acid in different solutions

How can neutralizing acids help you compare the amount of acid in different solutions?



Procedure

1. Label 3 clear plastic cups **indicator + vinegar**, **indicator + cream of tartar**, and **control**.
 2. Use a dropper to add 1 drop of vinegar to the *indicator + vinegar* cup. Gently swirl to mix.
 3. Use the flat end of a toothpick to scoop up a small amount of cream of tartar. Add the cream of tartar to the *indicator + cream of tartar* cup. Gently swirl to mix.
 4. Use a dropper to add 1 drop of detergent solution to the cup with the *indicator + vinegar* and gently swirl.
 5. Check to see if the color of the indicator solution is similar to the color of the control. If so, stop and record the number of drops in the chart below.
 6. If not, continue adding and counting drops of detergent solution, swirling, and comparing the color to the control. Stop adding drops when the color is similar to the color of the control. Record the number of drops in the chart below.
 7. Repeat Steps 4–6 for the cup with *indicator + cream of tartar*.
1. In the activity, you used a base to neutralize two acidic solutions. How did you know which one contained more acid?

| | Indicator + Vinegar | Indicator + Cream of tartar |
|---|--------------------------------|--|
| How many drops of laundry detergent solution did you use to get the solution to return to blue? | | |
| Place a check in the box beneath the solution that contains more acid. | | |

2. If you had two red cabbage indicator solutions that were greenish-blue, you would know that each of these solutions had a base in it. How could you compare these two solutions to find out which contained more base?

