



## ACIDS AND BASES

Litmus paper is often used to test the acidity/basicity of a solution. Litmus paper can be hard to find outside of science laboratories, but don't worry, you can follow the steps below to learn how to make your own pH paper test strips, using red cabbage leaves. The cabbage juice that you will make changes to red in the presence of an acid (pH less than 7), to blue at a neutral pH (pH around 7), or to purple in the presence of a base (pH greater than 7).

What you'll need:

- Red cabbage
- Coffee filters
- Knife and cutting board
- Blender (optional)
- Dropper or q-tip

Follow these steps to make your own cabbage-based pH paper test strips. Consider asking an adult for help!

1. Cut the red cabbage leaves into pieces that will fit into a blender. Blend the cabbage using the blender, adding a minimal amount of water needed to blend it. If a blender is not available, use a vegetable grater or carefully chop the cabbage into very fine pieces using a knife. (Safety is important in any lab experiment, so ask an adult for help with this step.)
2. Microwave the cabbage mixture until the liquid boils or until steam is coming off of the cabbage.
3. Allow the cabbage to cool down.
4. Using a coffee filter, filter the liquid from the cabbage into a bowl. This should have lots of pigment/colour.
5. Soak another coffee filter in the liquid that has just been filtered and allow it to dry.
6. Cut the dry coloured paper into test strips.
7. Using a dropper or a q-tip, apply a small amount of your tap/drinking water to a test strip.
8. Repeat step 7 using a variety of different solutions found in your home (examples provided below). Record your results in the table. Note: only use solutions that are safe to handle and non-toxic to humans or the environment.



Solution	Acidic	Neutral	Basic
Tap water			
Orange juice			
Pickle juice			
Laundry detergent			
Coca-Cola			