Red Cabbage Paper

Use a vegetable indicator to test acids and bases!

Activity Guide

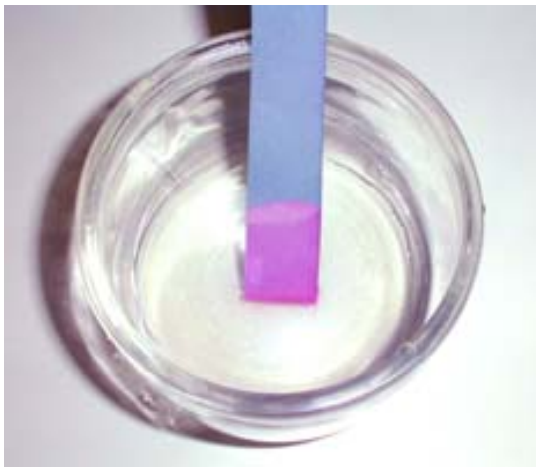
Try This!

1. Take a strip of red cabbage paper.
2. Use a cotton swab to paint some of the dilute acid on the paper or dip a strip into a small container containing the dilute acid. What color does the paper turn?
3. Now try the base and the water. Does the paper turn the same color?

What's Going On?

The paper was painted with the juice from cooked red cabbage. Red cabbage is a natural pH indicator. An *indicator* is a chemical that turns different colors when it comes into contact with an acid or a base.

Red cabbage paper starts out pale blue. It turns red or pink when it comes into contact with an acid, and green or yellow when it comes into contact with a base. It stays blue when it comes into contact with water, because water is neutral.

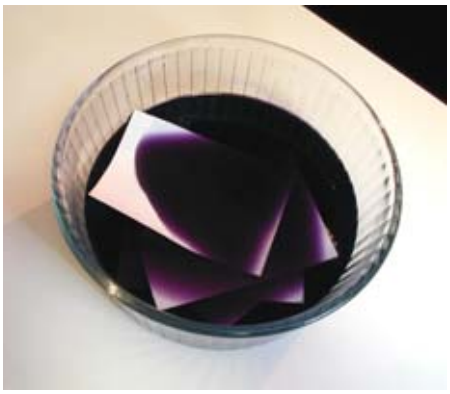


Learning Objectives

- An indicator is a chemical that turns different colors when it comes into contact with an acid or a base.
- Red cabbage is a natural pH indicator.

Materials

- Red cabbage paper *(Requires advance preparation; see below)*
- Cotton swabs
- Container for used cotton swabs
- Labeled cups of known chemicals:
    - Acid: white vinegar
    - Base: saturated solution of washing soda in water
    - Water



Advance Preparation:

- Head of red cabbage
- Knife or cabbage shredder
- Water
- Large pot to boil water
- Large bowl
- Strainer
- Cardstock
- Foam paintbrush

To make the red cabbage paper:

1. Add two quarts of water in the large pot, and put it on to boil.
2. In the meanwhile, shred or chop the cabbage and put it in the large bowl.
3. Pour the boiling water over the cabbage, and leave it to soak for 15 minutes.
4. Strain the cabbage, saving the liquid and discarding the solids.
5. Soak each sheet of cardstock in the red cabbage juice. Coat each sheet twice, allowing the paper to dry between coats.
6. Let the paper dry and then cut into strips.

Credits
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