



Cabbage Indicator

You will need:

¼ red cabbage (or deep coloured flower petals), clear drinking glasses, hot water, zip-lock plastic bag, testing substances:
Eg. Liquids like vinegar, juice, fizzy drink, detergent, egg, milk
Powders (dissolved in water first) baking soda, Napisan, citric acid

What to do:

1. Rip the cabbage leaf into VERY small pieces and place into the zip lock bag.
2. Cover the pieces with hot water and seal the bag.
3. Squeeze the bag gently for 10 minutes.
4. Now carefully pour a small amount of the purple liquid from the bag into each of the clear glasses ready for testing.
5. Slowly pour a little of the test substance into a glass – what do you observe?
6. Repeat with other testing liquids.

Take it further:

Try setting up as wide a range of colours as you can – you can mix in different testing liquids to achieve this goal. What do you notice about the liquids that make the cabbage juice turn red? Do they have anything in common? What about blue/green?

The Science:

The amazing stuff that makes red cabbage juice change colour belongs to a family of plant chemicals called anthocyanins. These act as an indicator as they change colour due to a chemical reaction that depends on the properties of the substance we test. In this case the cabbage juice goes red due to **acid** properties and substances that make it change to blue or green are known as **alkalines**.

