

Acids & Bases

Scientists often classify materials in order to understand more about them. One way of classifying liquids is whether the liquid is an acid or a base. Whether a liquid is an acid or base depends on the type of ions in it.

What is an acid?

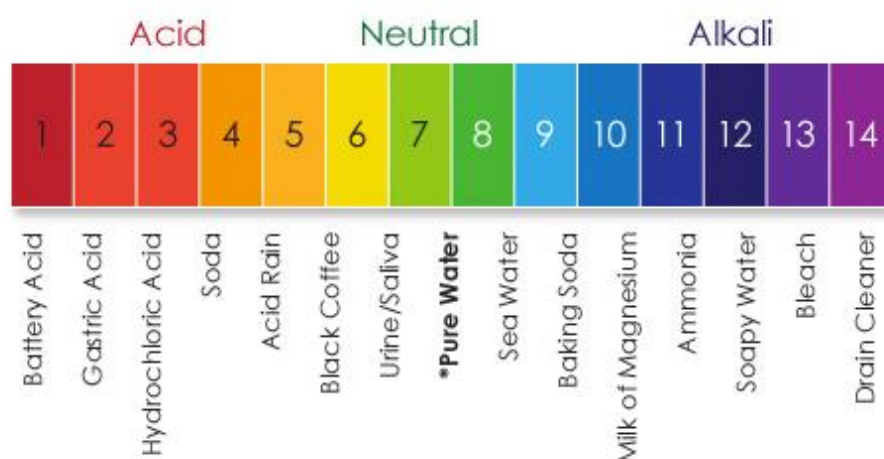
An acid is a substance that has a low pH (between 0 and 7). Acids have many hydrogen (H) ions. Examples of acids are lemon juice, vinegar, and have a sour taste.

What is a base?

A base is a substance that has a high pH (between 7 and 14). Bases have many hydroxide (OH) ions. Examples of bases are bleach, bicarbonate of sodium, and have a bitter taste.

The pH scale:

The pH scale is used by scientists to measure how acidic or basic a liquid is. Acids have low pH and bases have high pH.



Red Cabbage indicator

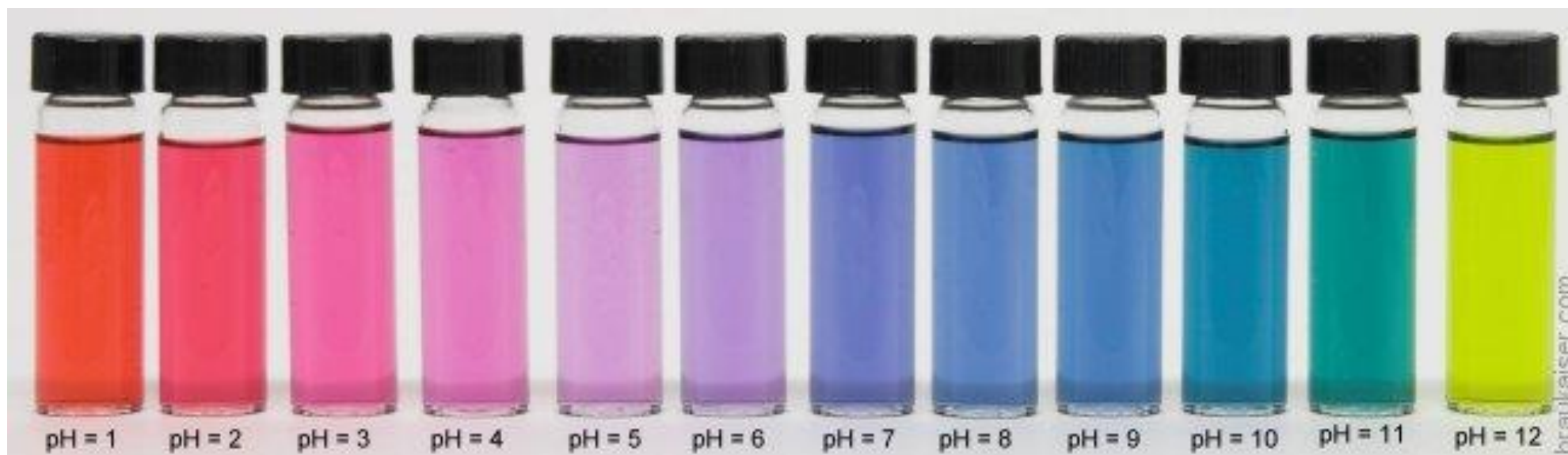
Investigate what happens when you add acids and bases into the juice from a red cabbage.

Red Cabbage is a natural pH indicator, which means that it changes colour when you add a substance that is an acid or a base.



- On the table are a range of different household liquids and powders.
- Test the different liquids to see whether they are acidic or basic
- Pour a little of the liquid into a test tube with the juice from the red cabbage.
- What colour did it turn?
- Compare the colour of the liquid with the Red Cabbage PH scale

Red Cabbage pH Scale



ACID

NEUTRAL

BASE