
Safety:

Instruments:

- several small glasses

Chemicals:

- lemon juice
- tap water
- laundry lye
- Materials from everyday life (e.g. cola, vinegar lemon cleaning agent, dish detergent water, etc.)
- red cabbage juice

Experiment:

- Place roughly 10 ml of water in three separate glasses.
- Put a few drops of the following into separate glasses.
glass 1: lemon juice
glass 2: tap water
glass 3: lye
- Put two full pipettes of red cabbage juice into each glass. The color changes are typical for cabbage juice acting as an indicator in acid, neutral and basic solutions. Write these colors down.
- Check out other substances with your cabbage juice indicator. Make a chart showing the substance, its color when indicator is added, and whether it is acid, neutral or basic.

Advice for the teacher:

Red cabbage juice is red in acidic solutions, purple in neutral solutions and green in basic solutions.

The pupils should learn that acids and bases have distinctive properties, which can be identified using indicators ("color-makers"). Indicators are important laboratory tools, since researchers are not allowed to touch or taste unknown substances for safety

Tip:

To make red cabbage juice, place fresh, shredded red cabbage leaves in a glass of tap water and boil them several minutes. Cool the mixture and filter it. Then it's ready for experimenting!
