

3.2 Assign household and technical substances to a pH scale



How would you assign different acidic or alkaline samples from everyday life to the pH scale of 0 – 14?



Similar to a temperature scale, an “acid scale”, known as the pH scale, has been developed. This scale goes from pH 0 (strong acid) to pH 7 (neutral) up to pH 14 (strong base). “p” stands for logarithm of “H” (symbol for the hydrogen of the acid).

Note: The lower the pH value, the more acidic the solution.

Provide acidic and basic solutions from everyday life to determine their pH.



Set up:

- plastic cups 200 ml
- pH Indicator paper roll
- pipettes 3 ml
- tap water
- samples of acidic or basic household solutions (beverages, fruits, washing soda, baking powder, pipe cleaner, etc. and tap water)
- plastic film

1. Cut as many 1 cm pieces of pH paper as you have samples and place them on the plastic film.
2. Use a pipette to place one drop of each sample on a piece of indicator paper.
3. Use the colour chart to determine the pH of the sample.
4. Make a list of sample/pH in order from the lowest to the highest pH.
5. After using the pipette for each sample you must rinse it with water.



Observing and documenting:



Why is Coca Cola adjusted to a pH of 3.5 with phosphoric acid?



Copy the danger symbol for strong acids and strong bases.
How can we protect ourselves from strong acids and bases in technical processes?



Technical application and vocational orientation:

Space for sketches