

Analyzing pH

Activity description

Content & Goals:

The protective layer of the skin is of crucial importance for skin health. In acne, skin cleansing is very important: it should be done with products which have a pH of about 5.5, like skin itself. Activity 4 is a practical exercise combined with an internet search. The goal is that the pupils understand pH theoretically and practically and are able to apply the knowledge.

Realization:

- Can be integrated into classroom lessons
- Cross-disciplinary goals are possible (Biology, Chemistry)

Variations:

Experiment/analysis

Requirements of material and media:

- Internet access
- Analysis material

Zeitbedarf:

- **Preparation time:** low time need (up to 1 hour)
- **Need of class time:** 90 mins.
- **Wrap-up time:** low time need (up to 1 hour)

Explanations and further information

Description of the analysis steps

The pH value analysis is done in the following steps:

- (1) The pupils investigate the term "pH" in the internet: its meaning and how it is measured.
- (2) Pupils and teachers bring skin cleansing and conditioning products from home / from the drugstore if desired.
- (3) The pupils search for the pH value of these products, first on the package, then (if not indicated there, as is the case rather often) in the internet.
- (4) The pupils measure the pH of these products dissolved in water, the pH of their skin and of everything else they are interested in testing. They will use the usual testing methods: pH testing paper and scale (from shops for laboratory material or pharmacies, the scale can be downloaded from the internet).

Sources of information

This activity is based on the learning texts on the learning platform (Acne, Skin). Further information on pH and its measurement can be found on the following websites:

General introduction on pH on Wikipedia, including a variety of scales:

<http://en.wikipedia.org/wiki/PH>

<http://www.epa.gov/acidrain/education/experiments.html>

Kids' site on pH and testing experiments (educational resource)