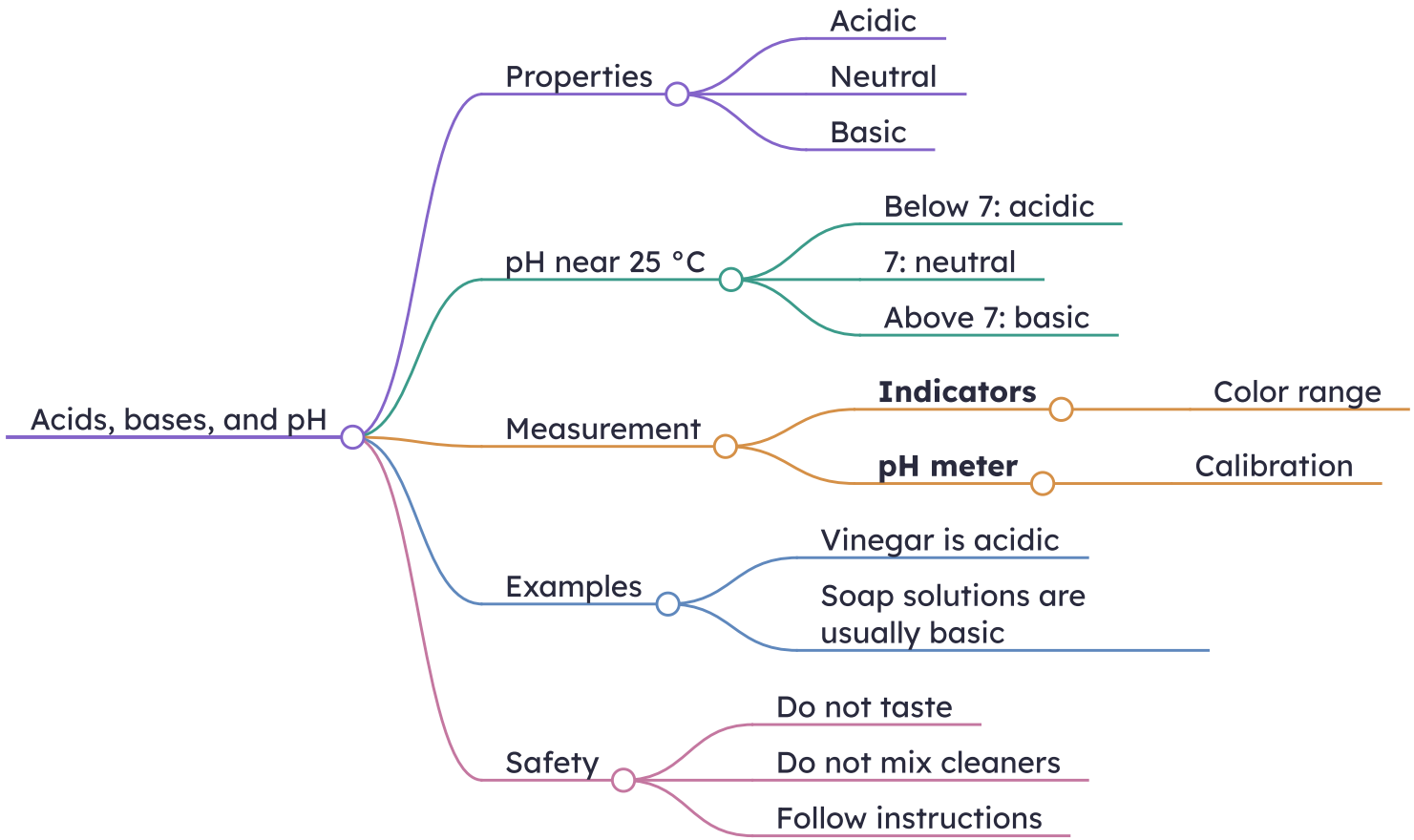
Acids, bases, and pH

Interpret measurements and indicators without tasting or mixing chemicals.



Read one branch at a time. Then cover the details and explain them in your own words.

Understand the topic

In aqueous solutions near 25 °C, pH below 7 is acidic, 7 is neutral, and above 7 is basic. The pH scale is logarithmic. Indicators change color over ranges, so their colors do not always provide exact values. Chemical behavior and risk also depend on the substances and concentrations involved.

How the map is organized

Separate properties, measurement, examples, and safety. Treat a color as an observation that needs interpretation.

> **Watch out for this**
> Never taste chemicals or mix cleaning products. Natural origin and pH alone do not establish safety.

Try it yourself

Use a teacher-provided indicator chart and labeled samples. Record the observed colors before classifying each solution.

Two questions to answer

A solution at pH 3 near 25 °C is…

Its pH is below the neutral value at that temperature.

An indicator color is…

Compare the color with the indicator's known response range.

Sources

openstax.org
https://openstax.org/books/chemistry-2e/pages/14-1-bronsted-lowry-acids-and-bases

Original practice material compiled by Studera.ai. Explore at studera.ai/en/resources/mind-map-examples.