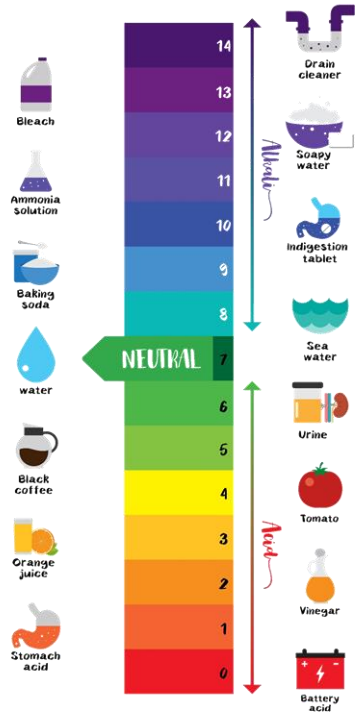
Solutions, Acids, & Bases

Section 2: Acids, Bases, & Salts



Acids can be found around our homes like in vinegar or even in fruits like lemons and oranges. An **acid** is a substance that produces hydrogen ions (H^+) in a solution. The ability to produce these ions give acids their distinct characteristics. All acid tastes sour; acids are electrolytes meaning they can conduct electricity in a solution; acids are corrosive which means they can be so strong they can eat away metals; and acids react with indicators to produce a predictable color change. An **indicator** is a compound that changes colors to helps determine whether something is an acid or a base. For example, a compound called litmus turns red when something is acidic.

Blue litmus paper turns red when something is acidic and red litmus paper turns blue when something is basic.

Like acids, bases can be found around our homes in hand soaps and cleaning products. A **base** is a substance that produces hydroxide ions (OH^-) in a solution and also accepts H^+ from acids. All bases share certain characteristics. In an undissolved state, many bases are crystalline solid. In a solution, a base feel slippery. Bases also have a bitter taste. Strong bases are corrosive and can cause damage to skin. The indicator litmus turns blue in bases. When an acidic and basic solutions are combined, **neutralization** occurs forming water and salt. Neutralization is a chemical reaction between an acid and a base that takes place in a water solution. A **salt** is a compound formed when negative ions of an acid combine with positive ions from a base. (acid + base = salt + water)

Review:

1. Identify three characteristics of acids.
2. Identify three characteristics of bases.
3. What is neutralization?

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