Acids, Bases, and pH

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What is an Acid? What are the properties of an acid?



An acid is a substance that produces Hydrogen ions when exposed to water. Acids have many other properties such as:

- Sour taste
- When exposed to blue litmus paper it turns red

Finally, some Acids have the word acid in their name, such as, Hydrochloric acid, Citric acid, and Acetic Acid.

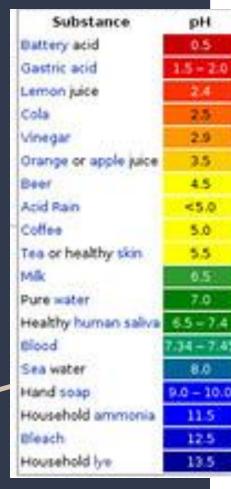
What is a Base? What are the properties of a base?



Like_the_Grand_Canyon. CC-BY-https://www.flickr.com/photos/like_the_ grand_canyon/25672683863 A Base is a substance that produces hydroxide ions when dissolved in water. Some properties of a Base are:

- Typically, they are slippery and bitter
- When exposed to red litmus paper they turn blue

Similarly to Acids, many bases have a common word within their names: Hydroxide. This can be seen in Lithium hydroxide, Sodium hydroxide, and Calcium hydroxide. What is pH? What does it have to do with Acids and Bases?



sidenoki. CC-BY-https://www.flickr.com/photos /sideki/32656439174 pH is a scale that allows us to figure out how acidic or basic a substance. This scale goes from 1 to 14 with 7 being neutral. If the pH is lower than 7 then the substance is acidic and if it's above 7 then the substance is basic. To test pH you can use a variety of methods from litmus paper to an electronic tester to homemade litmus paper.

Useful Facts: Acids, Bases, and pH

Hydroxide = Hydrogen This is a neutral substance Hydrogen > Hydroxide This is an acidic substance Hydroxide > Hydrogen

This is a basic substance

Within living organisms we use substances called buffers, which donate hydrogen or hydroxide ions, to prevent our pH from fluctuating too much.

Sources

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