

Example of essay on history of acids

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Acids trace a history back to the years of when tasting was the main mode of classification of substances. This traces back to the ancient Greeks whereby a name of sour-tasting substances was developed from Latin. Among the very many substances tested, a very sour tasting substance, which was vinegar, was found to portray certain characteristics (Porter, 1992.). This later develop to the name ‘ acid’ which up to date is used to mean substances which have sour tastes and are slippery and corrosive. In some simple experiments, the 17th century scientists were able to learn that acids were corrosive mostly to certain metal elements. The most significant experiments were in the French textile industry where some workers added up some chemicals to dyes and found dyes from a certain plant changed color intensity of an overall color change was established. This led to a conclusion that a certain chemical process must be happening between the chemical added and the dye. However, the workers were not very much interested in knowing what transpired (Isabelle, 1996).

Another major development in the history of acids was extraction of gold and silver. In most cases, these metals were found alloys and therefore separation was necessary. The only mode of separation was to mix the alloy in a chemical that would dissolve only one metal element while leaving the other behind. This led to a major advancement in identification of acids as more than sour tasting substances. It was found that when this sour chemical was mixed with the gold-silver alloy and boiled, silver dissolved and solid gold removed. Silver was obtained by boiling the sour chemical away. Discovery of salts also led to a great deal of development in classification of acids. Among the discovered salts were hydrochloric acid, sulfuric acid and

nitric acid which were all named in French. Glauber carried out these experiments and went ahead to react an acid and an alkali describing the reaction as a battle (Joe, 2005.).

Having classified and separated the acids, 19th and 20th century scientists came in to clearly study the characteristics of acids apart from the sour taste. Their study seems to be based on Glauber's work and building a better understanding of acids in the contemporary society.

One of such scientists is Arrhenius. This is a scientist who worked in the field of chemistry and took specific study on acids and basis. This led to Arrhenius concept of an acid which is defined as ' a substance that dissociates in water to release hydrogen ions.' From this argument, we grasp the idea why acids are said to increase the concentration of hydrogen ions once an acid dissolves in water. This concept is still one of the most widely accepted and used definitions of an acid (Mark, 2003).

Another scientist who contributed immensely in the development of the current understanding of an acid is Bronsted Lowry. In his concept which seems to concur with Arrhenius' concept is that ' an acid is a substance that acts as a proton donor in a reaction.' Since an acid is active only in solution form, it dissociates to produce protons which it can donate during a reaction. The only proton it forms is a hydrogen ion thus in simple language, an acid is a substance that ionizes to release hydrogen ions. This definition is the same as that of Arrhenius though stated from a chemical reaction perspective (Warren, 2000).

The last significant but not the last in contribution of what an acid is today is Boyle. In his description of an acid in 1680, he described an acid as a

solution that would dissolve many substances, had a sour taste and most important of all, lost their properties after coming into contact with certain chemicals which were further discovered to be alkalis. The bit on reaction and color changes in dyes explain the current methods used to describe the strength of acids as well s determining other factors like concentration and basicity (Meyers, 2003).

References

Mark S. 2003. Chemistry chronicles: a basic history of acids from Aristotle to Arnold. American Chemical society

Joe P. 2005. Origin of acids and alkalis, retrieved from <http://www1.umn.edu/ships/modules/chem/acids.htm>

Isabelle S. 1996. A History of Chemistry, Harvard University Press

Porter, R. 1992. The Norton History of Chemistry. New York: W. W. Norton and Company.

Meyers, R 2003. The Basics of Chemistry: Inorganic Chemistry, 2nd ed. Pearson Prentice-Hall

Warren, S. 2000, Organic Chemistry, Oxford University Press