Henry Louis Le Chatelier was one of the most influential chemists of all time. This paper will guide you to his greatest discovery in the world of physics and chemistry.

Le Chatelier's Principle

A Guide to this Exciting Principle in Science

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Chatelier's Principle was the basic idea that every time a system in chemistry acts to oppose changes in equilibrium, and to restore the equilibrium the system will create a chemical path way to reduce or oppose the disturbance so that it will stabilize again into a thermodynamic equilibrium. In chemistry, this principle can be used to predict the effect of conditions in a chemical equilibrium. The ideas is that if in a condition of which a chemical system has an equilibrium that experiences changes in concentration, temperature, or volume, or even partial pressure, then the equilibrium most shift in order to counteract to the imposed change and create a new equilibrium established. The same idea and shift of values also can apply to Pharmacology, and economics.

The principle of a stabilized change in Equilibrium has been established as a physical law, and maybe even a law of logic and nature itself. This idea provided by Chatelier provides a principle of resistance or the idea of the product having the ability to stay in the state of homeostasis.

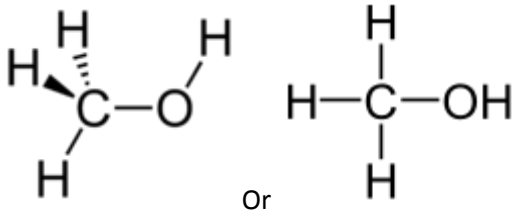
CHANGE OF CONCENTRATION

Changing the concentration of a specific ingredient will surely shift the equilibrium to the side and reduce the change in the concentration.

A specific example is shown here:

$CO + 2\ H_2 \rightleftharpoons CH_3OH$

This can be illustrated as:



Or

Or even simply as: $CO + 2\ H_2 \rightarrow CH_3OH$

THE EFFECT VIEWED IN CHANGE OF TEMPATURE

Rules:

- A change in pressure due to a change of volume will absolutely shift the equilibrium
- If the change remains more significant in the denominator of the equilibrium then a shift will be made in the equilibrium
- Increase in pressures due to decreasing volume will the cause the reactions to cause a shift to the side of fewer moles. However, the opposite which is a decrease of pressure with an increase of volume will then shift to the side with more moles.

REFERENCES:

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2. ^ "The Biophysical Basis for the Graphical Representations". Retrieved 2009-05-04.
3. ^ Samuelson, Paul A (1983). *Foundations of Economic Analysis*. Harvard University Press. ISBN 0-674-31301-1.