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**PASTEUR AND THE OTHER RESEARCHERS WHO PROVIDED THE
SIGNIFICANT PROOF FOR THE FERMENTATION BY LIVING ORGANISMS**

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Abstract

Long before the nature of bacteria or fermentation was known, the human being used the activities of certain bacteria in the preservation and preparation of food products. The study of organism and process which produces fermentation started with development of microscope by Anton van Leeuwenhoek (1632-1723) Dutch microscopist. Through his simple microscope, he discovered and accurately described the protozoa (which he called animalcules) in 1674 and the bacteria in 1676. This very simple invention soon revolutionized the man's knowledge of the heretofore invisible microbial world. Then in 1680, Leeuwenhoek, using a microscope that magnified the diameter of each object 300-fold, he investigated yeast and found them consisting of tiny spheroids. While the protozoa were alive clearly, the yeast did not appear to be alive. No connection was drawn between the existence of these very small organisms and the important and well known. Phenomenon, "fermentation." But the true purpose and nature of fermentation was first grasped by Louis Pasteur, and completed with the work of his followers. Fermentation is a slow decomposition process of organic substances induced by microorganism such as molds, yeast or bacteria, or by complex nitrogenous organic matters (enzyme) of vegetable or animal origin. It is usually accompanied by the evolution of heat and gas. The alcoholic fermentation of sugar and starch, and the lactic fermentation are important processes. Yeasts because of their ability to ferment carbohydrates, some of them are great value in brewing and baking industries. The yeasts, especially those of the genus *saccharomyces* have long been of commercial importance, because they are the leading agents of alcoholic fermentation. For this reason, they are essential to the making of wine and brewing beer, and the other alcoholic beverages and the industrial alcohol. Approximately the 700 or more species of the yeasts that have been described possibly present only about one percent of the species in the nature, so the majority of them yet to be discovered. Yeast play a large part in the industrial fermentation processes such as the industrial enzymes and chemicals, fermentation in muscles, fermentation in pickling, fermentation in sour milk products and food storage and food storage, fermentation in brewing and baking, and butanol-acetone fermentation. Since the early times yeast have been used in treating various ailments. Brewer's yeast has a high content of thiamine and other vitamins of the B-complex group. A preparation containing yeast cells used to treat diseases caused by vitamin B deficiency.

Keywords Pasteur, fermentation, and yeast.
