

Spores

A good number of varieties of yeasts and bacteria are productive of spores.

Just as the seed of a plant, these spores can retain their vitality for a time shorter or longer, even if they were exposed to the influence of certain factors which would kill the organisms that gave them birth.

Condition of Existence

Yeasts and nearly all bacteria require, in order to develop and multiply, the oxygen of the air. In this case, they are called "aerobics."

To the contrary, some kinds of bacteria seem to grow just as well, when in the shelter of the air, consequently without the help of oxygen. These bacteria are called "anaerobics".

From these facts, we consequently infer that the exclusion of the air, naturally containing oxygen, is not always a protection, if a bacterium "anaerobic" finds its way into a glass jar or a tin can when the latter is being sealed.

It is the presence of these yeasts and bacteria that cause the alteration of aliments. Chemical changes occur which are revealed to us either by escaping gasses or by the unpleasant taste of some victuals.

The development of a bacterium does not take place within a substance containing a strong percentage of sugar; but in a suitable liquid body with only a small part of sugar, its growth is rapid.

Food with a large percentage of albuminoid also affords an excellent medium for their multiplication, specially if the degree of dampness and heat is favorable.

Eggs, milk, meats, fish and leguminous products such as: beans, peas, etc., are very rich in azotized principles owing to the omnipresence of bacteria; the keeping of these aliments consequently presents certain difficulties. Their example is a striking one, particularly in a warm and wet weather when all these strongly azotized substances spoil in a very short time.

As regards the yeasts, they develop excessively fast when they are in a medium formed of a diluted solution containing hydrates in addition with mineral and azotized constituents.

The acidity of a few vegetables is so high and that of albuminoid substances so small that very few yeasts and bacteria develop into same. Cranberries (blueberries), rhubarb and citrons belong to this class of vegetable products.

The same as some vegetables, fruits as a whole, owing to their sour-