

ness, do not constitute a favorable midst for the development of bacteria. Canned fruits are rather altered by the growth of yeasts.

The temperature is still an essential factor for the propagation of micro-organisms. Some species require a very low temperature; others a very high one, up to 125°F. and even more.

If a bacterium is productive of spores, the complete destruction of the latter will only be succeeded at the temperature of boiling water, or 212°F. during one hour and for a longer time in some cases.

However, the greatest number of these species are destroyed at the temperature of boiling water during a lapse of time of 10 or 15 minutes.

This leads us to the conclusion that in order to kill a spore the temperature must be higher than that of boiling water or that the article to be kept must be submitted to 212°F. for a longer time or again under pressure for a shorter time.

Yeasts and their spores are more easily destroyed by heat than the spores of a bacterium.

If it is naturally impossible to ascertain what kind of organisms are existing in any food, it is however known that most of the fruits do not offer a suitable nutritive midst and, as a general rule, in submitting them during 10 or 15 minutes to the temperature of boiling water, the yeasts which develop, the same as in the juices of fruits, are thoroughly done away with.

After all deductions are made, fruits, thanks to their small percentage of albuminoid substances, are consequently kept more easily than the aliments rich of the latter.

If the fruits, as well as all the other instruments used in canning, are perfectly sterilized and if the glass jar or tin can is hermetically sealed, there is no reason to prevent their keeping for one year and longer (excepting a small loss of texture and flavour), although canned fruits suffer a certain damage even under the most favorable conditions.

It is not necessary that the container be hermetically closed when a fruit is kept with a large addition of sugar (one pound of sugar for each pound of fruit), because thick syrup is not propitious to the development of harmful germs.

However, glass containers closing hermetically are more recommendable for the keeping of such articles than large open receptables, because molds come freely on the wet surface of these strongly sugared substances when the latter are exposed to the air.

Mold

Spores are very light and are constantly being transported by the wind. Being, however, a little heavier than the air, they end by settling