

Glossary

- **Bacteria:** Bacteria constitute a large domain of prokaryotic microorganisms. Typically a few micrometres in length, bacteria have a number of shapes, ranging from spheres to rods and spirals
- **Botulism:** Botulism is a rare but serious paralytic illness caused by the bacterium *Clostridium botulinum*. Foodborne botulism has been caused by such foods as canned . *Clostridium botulinum* is a Gram-positive, rod-shaped, anaerobic, spore-forming, motile bacterium with the ability to produce the neurotoxin botulinum.
- ***Psychrophiles:*** Prefer low temperatures. They can grow at temperatures of 32 °F (0 °C) or lower, but they can also thrive at moderate temperatures of 59 °F (15 °C) to 68 °F (20 °C). They are quite common in environments where the temperature remains consistently low. They are mainly of marine origin.
- **pathogen :**A **pathogen** or infectious agent is a biological agent that causes disease or illness to its host. The term is most often used for agents that disrupt the normal physiology of a multicellular animal or plant. However, **pathogens** can infect unicellular organisms from all of the biological kingdoms.
- **Fermentation:** Fermentation is a naturally occurring chemical reaction by which a natural food is converted into another form by pathogens. It is a process in which food spoils, but results in the formation of an edible product.
- **Canning:** one of the most common methods for preserving foods today is to enclose them in a sterile container. The term canning refers to this method although the specific container can be glass, plastic, or some other material as well as a metal can, from which the procedure originally obtained its name.
- **Irradiation:** this is a modern technique of food preservation. In this method the food is exposed to either electromagnetic or ionizing radiation which destroys the entire microorganism present in it.

- **Hot smoking:** Hot smoking is used primarily with fresh or frozen foods, while cold smoking is used most often with salted products. The most advantageous conditions for each kind of smoking, such as air velocity, relative humidity, length of exposure, and salt content are now generally understood and applied during the smoking process.
- **Salting:** Salting or curing draws moisture from the meat through a process of osmosis. Meat is cured with salt or sugar, or a combination of the two. Nitrates and nitrites are also often used to cure meat and contribute the characteristic pink color, as well as inhibition of *Clostridium botulinum*.
- **"Sugaring:** Sugar tends to draw water from the microbes (plasmolysis). This process leaves the microbial cells dehydrated, thus killing them. In this way, the food will remain safe from microbial spoilage.