

Glossary of terms

Additives and ingredients	Substances added to foods to influence their condition or to bring about specific characteristics or effects (help manufacture, preserve, improve palatability, eye appeal, convenience - e.g. emulsifiers, flavours, thickeners, curing agents, humectants, colours, vitamins, minerals, moulds, yeasts, and bacterial inhibitors).
Aerobic	Refers to any organism that can live in an oxygen atmosphere.
Allergy	A reaction provoked by antigen contact with antibodies. Symptoms include widening of capillaries (reddening of skin or mucous membranes), increase in permeability (local swelling) and secretion (tears, sputum, rhinitis), itching.
Ambient temperature	Surrounding temperature; usually refers to room temperature.
Anaerobic	Refers to any organism that cannot live in an oxygen atmosphere.
Antibiotics	Secondary metabolites of microorganism which, in small quantities, can inhibit or lethally harm another microorganism.
A_w value	The ratio of the water vapour pressure over a food to the saturation pressure of pure distilled water at a given temperature, expressed on a scale of 1.0 to 0.0. Pure water is 1.0 on this scale (WHO). It refers to the amount of water available for growth and multiplication of microorganisms.
Bacteria	A diverse group of single-celled organisms that are neither plants nor animals. Some bacteria are useful; others are harmful.
Botulism	Neuromuscular intoxication caused by <i>Clostridium botulinum</i> toxin. When the vegetative cells grow in a food they produce a potent exotoxin which causes botulism when ingested. It is the most dangerous type of food poisoning and is usually caused by under-processed contaminated canned foods.
Carrier	A person who excretes the organism without showing clinical signs of the disease.
Critical Control Point (CCP)	A step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level. (Codex)
Critical limit	A criterion that separates acceptability from unacceptability. (Codex)
Cholera	Acute, infectious human disease, usually transmitted by faecal-polluted water, characterised by severe diarrhoea and vomiting, often leading to dehydration.

Contaminant	Any biological or chemical agent, foreign matter or other substances not intentionally added to food that may compromise food safety and suitability. (Codex)
Contamination	The introduction or occurrence of a contaminant in food or food environment. (Codex)
Cross Contamination	A contamination occurring during the production, processing or preparation of food, either through direct contact of uncontaminated materials with contaminated materials or through transmission by a vehicle.
Danger zone	The temperature range most conducive to the multiplication of bacteria (10°C to 60°C).
Death phase	The stage during which the viable number of cells in the microbial population declines.
Decontamination	Sanitation, disinfection. Drastic reduction of the microbial population.
Deep freezing	A method to extend the shelf life or keeping quality of a food product by storing it at temperatures below -18°C until it is delivered to the consumer.
Dehydration	Loss of water.
Diarrhoea	Refers to passing a fluid stools with a high frequency. This is the most typical symptom associated with foodborne infection.
Disinfection	The reduction, by means of chemical agents and/or physical methods, of the number of microorganisms in the environment, to a level that does not compromise food safety or suitability. (Codex)
D-value	The time required at a given temperature (e.g. 70°C = D ₇₀) to reduce the number of viable cells or spores/endospores of a specific organism by 90% (or 10-fold). The time is quoted in minutes or second; the temperature is indicated by a subscript.
Dysentery	A group of intestinal diseases characterised by abdominal pain and diarrhoea with blood and mucus in the stools.
Endemic:	A disease that prevails or recurs frequently in a country or an area, or among (a) particular group(s) of people.
Enteric fever	A term used for typhoid fever or paratyphoid fever types A, B, and C. In some countries these diseases are referred to as typhus and paratyphus.
Epidemic	An outbreak of an infectious disease that affects many people at one time in the same area.

Extrinsic factors	Factors external to a food that may be applied (e.g. by the processor) for extending the shelf life or keeping quality of a food (e.g. temperature, preservatives, storage).
Fermentation	A desirable process of biochemical modification of primary food products brought about by microorganisms and their enzymes.
Food handler	Any person who handles packaged or unpackaged food, food equipment and utensils or surfaces in contact with food and is therefore expected to comply with food hygiene requirements. (Codex)
Food hygiene	All conditions and measures necessary to ensure the safety and suitability of food at all stages of the food chain. (Codex)
Foodborne disease	A disease, usually either infectious or toxic in nature, caused by agents that enter the body through the ingestion of food. The term "food" includes drinking-water. Sometimes this is incorrectly referred to as food poisoning.
Food poisoning	This is a term that is often used to refer to foodborne illness/disease but WHO does not recommend it.
Food safety	Assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use. (Codex)
Food spoilage	Food becomes unfit to eat as a result of: growth and activities of microorganisms, insect infestation, action of enzymes, chemical reactions, and physical changes (e.g. freezing, burning, drying, pressure, and humidity).
Food toxin	Compounds naturally present in food that are toxic or carcinogenic or have pharmacological effects. This includes natural carcinogens and nutritional inhibitors.
Fungus	See Mould.
F value	The number of minutes required to destroy a given number of organisms at a given temperature.
F ₀ value	F ₀ is the time (in minutes) required at 121°C (250°F) to destroy a specified number of spores of <i>Clostridium botulinum</i> . It is internationally accepted that a F ₀ of 3 minutes is a satisfactory process for a low acid canned food; such a process is estimated to kill at least 10 ¹² spores of <i>Clostridium botulinum</i> .
Gastro-enteritis	Also known as gut infection. Inflammatory change of the lining of stomach and intestine usually caused by microorganisms ingested with the food or water.
Gut microbes	Microorganisms that live in the gastrointestinal tract of man or animals.

HACCP	"Hazard Analysis and Critical Control Point". A system that identifies, evaluates, and controls hazards that are significant for food safety. (Codex)
Hazard	A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect. (Codex)
Heat sterilisation	Commonly practised method for the destruction (killing) of all viable microorganisms.
Heavy metals	Metals with a specific gravity of >5; Pb, Fe, Cu, Zn, Ni, Cr, Wo, Mo, Cd, Co, U, V, Ag, Au, and Pt, as well as semi-metals As, Sb, and Te. They are found in extremely minute concentrations in all foods and as such do not exert any inhibitory action against microorganisms. Fe, Cu, Zn, and Mo are required as trace elements for the growth or multiplication of microorganisms.
High-risk food	These include foods that have been linked epidemiologically to foodborne disease or that, due to their nature, preparation or storage, present a greater risk of foodborne disease than other foods.
High temperature processing	Process for continuous pasteurisation of milk at 85-90° C for 2 - 4 seconds or equivalent treatment.
Immunity	Part of the defence system of man and animal against infections.
Incubation period	The time interval between exposure to a pathogen or toxin and the appearance of the first clinical symptoms (e.g. 7-21 days for enteric fever). It differs considerably between foodborne infections and intoxication.
Indicator organism	A microorganism used to check the effectiveness of GHP.
Infection	Entry and colonisation of an infectious microorganism in a living macroorganism (host). Disease does not always develop but the host becomes a "carrier".
Intoxication	Bacteria such as <i>Clostridium botulinum</i> or <i>Staphylococcus aureus</i> grow and produce toxin in the food. When the food is eaten the person becomes ill. In contrast to an infection, the person becomes ill without eating the live bacteria.
Irradiation	Treatment with ionising radiation to render food safe or increase its shelf-life.
Lag (latent) phase	The time taken for a microorganism to adapt to its environment. The lag phase is followed by a phase of active growth.
Malabsorption	Failure to absorb various nutrients.

Mesophile	Microorganism preferring a moderate temperature for growth (between 15-48 C°, with an optimum of about 37°C). This group includes all bacteria and fungi that are pathogenic to warm-blooded animals.
Metabolism	Biochemical process in all living cells. Uptake of nutrients and assimilation in the cell.
Metabolite:	An intermediate or end product of microbial metabolism partially excreted in food, with a desired or undesired effect e.g. organic acids, CO ₂ and other gases, ethanol, antibiotics, mycotoxins, flavour and other substances influencing the taste.
Microorganisms (microbes)	Simple living creatures comprising viruses, bacteria, algae, protozoa and fungi (fungi include yeast and moulds).
Monitoring (HACCP)	The act of conducting a planned sequence of observations or measurements of control parameters to assess whether a CCP is under control. (Codex)
Mould	Refers to any fungus that normally forms a mat of branched elongated cells. Several moulds are useful in the preparation of food (e.g. cheese and Tempe) but many cause spoilage. Some moulds produce harmful mycotoxins.
Mycotoxins	Toxins produced by fungi during growth. The most widely studied mycotoxins are the aflatoxins produced by the moulds <i>Aspergillus flavus</i> and <i>parasiticus</i> .
Nutrition	The combination of processes by which a living organism receives and uses the material necessary to maintain its function, to grow, and to renew its components.
Ochratoxins	A group of mycotoxins produced by <i>Aspergilli</i> and <i>Penicillia</i> growing on foodstuffs. Ochratoxin A is the best known.
Packaging	A container or wrapping designed to protect food commodities from mechanical and climatic influences, and to act as a barrier to pests and microorganisms.
Pasteurisation	Heating a food to temperatures in the range 60°C to 100°C. Pasteurisation destroys most toxins and vegetative cells of microorganisms causing food poisoning. Most bacterial spores survive pasteurisation.
Pathogenic	Pertaining to the ability to produce disease.
Pathogens	Any disease-causing microorganism or material (bacteria, yeast, fungi, and viruses) that may affect other living organisms, to the detriment of their health.
Pesticides	All compounds used in plant protection against pests.
pH value	Measure of the "acidity" or "alkalinity" of a water-containing product, given as negative logarithm of the H ₂ O + ion activity (hydrogen ion exponent).

Preservation	Various methods to extend the shelf life of food (e.g. dehydration, heat sterilisation, freezing, radiation, addition of preservatives) by inhibiting the multiplication and/or growth of microorganisms and by minimising chemical and sensory changes.
Preservatives	Antimicrobial substances that prevent multiplication of microorganisms and sometimes also used for preventing other types of undesirable activities.
Risk	A function of the probability of an adverse health effect and the severity of that effect, consequential to (a) hazard(s) in food.
Serotype	Serovars. A serologically (antigenically) distinct variety within a species or genus.
Spore	“Bacterial spores”. Extremely resistant survival forms produced by bacteria (genera <i>Bacillus</i> , <i>Clostridium</i>) under conditions of nutrient limitation.
Sterilisation	In the context of food processing, a method of preservation by killing all microorganisms associated with a foodstuff usually by applying heat, for example in bottling and canning. (WHO)
Strain	A pure culture or microbial isolate of known origin and physiological characteristics; the cells of such culture are accepted to be genetically similar.
Target value	A value or characteristic of a physical, chemical or biological nature, used to assure that critical limits are not exceeded.
Thermal death point	The temperature (in °C or °K) at which all microorganism are killed within 10 minutes.
Thermal death time	Time (in minutes) at a given temperature (°C or °K) required to destroy all microorganisms.
Toxic	Poisonous.
Vector	Also known as a vehicle. Method of transport for microorganisms to hosts or habitats (e.g. wind, water, insects, rodents, pets, man, utensils).
Vegetative cells	Cells able to divide and reproduce the same (identical) form. Vegetative state is more susceptible to heat, radiation, drying, preservatives, disinfectants, and other noxious elements than the spore forms.
Verification	The application of methods, procedures, tests and other evaluations, in addition to monitoring to determine compliance with the HACCP plan. (Codex)

Viral gastro-enteritis	Collective term for gastro-enteritis caused by viruses, mostly transmitted to man by water, raw salads, and vegetables. The following are described as pathogens: Rota viruses Group A and others, Norwalk viruses and large "related" types, (27 - 32 nm), Adeno-, Astro- and Caliciviruses.
Viral hepatitis	Also known as infectious jaundice. An acute infection that is caused by the type A hepatitis virus. The virus is transmitted from person to person by the faecal-oral route, such as on contaminated food, water and utensils.
Virus	Internal parasites of the cells of many organisms; they are unable to grow outside of the living cells of their host.
Water activity	See A_w value.
Water requirement	Practically all microorganism multiply well at water activities of 1 - 0.98, where sufficient water with dissolved nutrients is available.
Yeast	Single-celled fungi that multiply by budding.
Zoonoses	Communicable diseases that can be transmitted to man by animals.