



# Food Safety and Hygiene Incorporating Hazard Analysis and Critical Control Point (HACCP)

## Terminology Explained

### Scope

This document is designed to explain terminology commonly encountered in food safety and hygiene incorporating Hazard Analysis and Critical Control Point (HACCP). The document is aimed at those people with limited understanding/knowledge and/or experience of food safety and hygiene. It can also be used as a day-to-day reference source. The purpose of the document is to provide help in the initial and ongoing development and implementation of HACCP at all levels in the food sector. All examples used in the document are for illustration purposes only. The document is not exhaustive and should be used in conjunction with other information resources.

## Term

### **Accreditation** (see *Certification*)

A procedure by which a recognised independent body accredits organisations which are involved in the certification of quality systems, products, services or personnel, to recognised national and/or international standards. The accreditation body may also carry out accreditation inspections in its own right. In Ireland the official national organisation for accreditation is the National Accreditation Board (NAB) e.g. NAB has accredited the National Standards Authority of Ireland (NSAI) for the certification of quality inspections and in its own right NAB has accredited many food testing laboratories in Ireland for analysis of food.

### **Ambient (Room) Temperature**

(see *Danger Zone, End Point Temperature*)

The temperature of the surrounding working environment.

### **Analyse/Analysis**

A detailed examination, i.e. test of a food, process or area e.g. a laboratory carries out an analysis of a cooked chicken burger to determine its fat content or presence of a pathogen, e.g. *Salmonella*.

### **Antibiotic**

Chemicals synthetically produced or naturally produced by microorganisms which are able to kill or stop the growth of another microorganism e.g. penicillin.

### **Antimicrobial** (see *Antibiotic, Disinfectant*)

A process or chemical designed to reduce or stop microorganisms from growing e.g. antibiotics, antiseptics, disinfectants.

### **Approved Source/Supplier/Vendor**

A reputable or reliable supplier of ingredients, materials or services used in the preparation of a food e.g. a well known or established business which you have done business with before.

### **Assessment**

(see *Audit, Environmental Health Officer (EHO), Inspection*)

This is the collection, analysis, and interpretation of evidence to determine how well a HACCP plan performs against the needs, standards and expectations of a particular business e.g. normally carried out by a local EHO, but can be carried out by a business themselves.

### **Audit** (see *Inspection, Verification*)

The systematic examination including inspection and verification to determine whether activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives, e.g. an EHO examines a HACCP system to ensure that it is being implemented effectively and achieving compliance with the law.

### **Bacteria**

(see *Microorganism*)

Single-celled living organisms which cannot be seen with the naked eye e.g. *Salmonella*.

### **Bactericide**

A chemical or process designed to destroy bacteria e.g. chlorine based disinfectant.





**'Best-Before' Date** (see *Food Spoilage, 'Use-by' Date*)

The date up until a food can reasonably be expected to retain its best quality if kept under the correct storage conditions. 'Best-before' dates are more about quality than safety e.g. canned and dried foods such as soft drinks, crisps and biscuits have 'best-before' dates.

**Biological Hazard(s)** (see *Contamination, Chemical/Physical Hazards, Intoxication*)

Living organisms (e.g. pathogenic bacteria) which may cause harm if they or their products are consumed in food e.g. *Salmonella* in a ready-to-eat chicken meal.

**Calibration**

A procedure for ensuring that a known measured output of an instrument such as temperature or weight corresponds to a known national standard value for that property e.g. a temperature probe for a freezer is calibrated to a national standard to have an accuracy of  $\pm 2^{\circ}\text{C}$ . A reading of  $-20^{\circ}\text{C}$  would indicate that the temperature in the freezer is between  $-18^{\circ}\text{C}$  and  $-22^{\circ}\text{C}$ .

**Carrier (Asymptotic Carrier)**

A person who harbours disease causing organisms inside their bodies and excretes them without suffering from symptoms of that disease e.g. a person recovering from salmonella food poisoning.

**Certification** (see *Accreditation*)

A procedure by which a recognised body, following its own independent assessment determines whether a business complies with the requirements of a recognised standard e.g. the National Standards Authority of Ireland (NSAI) provides certification for food businesses complying with the requirements of Irish and international standards e.g. I.S. 22000:2005 Food Safety Management Systems.

**Checklist**

A written list of points or actions that need to be considered during the planning, implementation, assessment and ongoing operation of a HACCP plan e.g. a caterer is organising an internal audit of a HACCP plan and writes a checklist of things to examine during the audit.

**Chemical Hazard(s)** (see *Contamination, Biological/Physical Hazards, Intoxication*)

Chemicals (e.g. poison) which may cause harm if consumed e.g. bleach in milk.

**Clean** (see *Cleaning, Cleaning Schedule, Detergent*)

A surface free of food particles, dirt, grease and other undesirable debris.

**Cleaning** (see *Clean, Cleaning Schedule*)

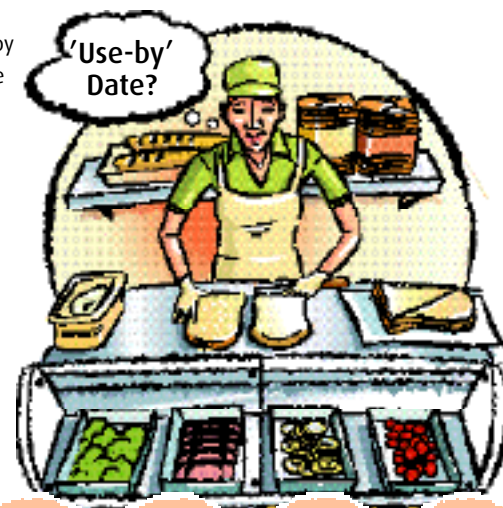
The physical removal of soil, food residues, dirt, grease and other undesirable debris e.g. scrubbing down a food chopping board

**Cleaning Schedule** (see *Detergent, Disinfectant, Sanitation Schedule, Sanitiser, Sanitary*)

A written schedule used to describe all items which must be cleaned and free of soil, food residues, dirt, grease and other undesirable debris. The schedule has details of what (i.e. items to clean), who (i.e. staff responsible), how (i.e. method of cleaning) and when (i.e. frequency of cleaning), e.g. a kitchen floor must be cleaned with detergent every day by the kitchen porter.

**Codex Alimentarius Commission**

The Codex Alimentarius Commission was created by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) to develop food standards and guidelines.



### Commercially Sterile

(see *Sterile*)

The condition achieved in a food by heating it alone or in combination with other ingredients or treatments, to render it free of organisms capable of growing in the food at room or ambient temperatures e.g. canned foods.

**Competent Regulatory Authority** (see *Enforcement Officer, Environmental Health Officer*)

The organisation with responsibility to enforce and ensure compliance with recognised standards and/or the requirements of legislation e.g. the Food Safety Authority of Ireland.

### Compliance

Meeting all the requirements of a recognised standard. A prerequisite of compliance in the food industry is ensuring that the statutory requirements of legislation are met or exceeded e.g. a catering business should comply with the NSAI Irish Standard for Hygiene in the Catering Sector (I.S. 340: 2007) and have in place a food safety management system based on the principles of HACCP to comply with current legislation (Regulation (EC) No. 852/2004 on the hygiene of foodstuffs).

### Conformity

All actions in relation to particular guidelines, standards or legislation which are carried out according to established procedures e.g. the temperature of a refrigerator is maintained at 5°C and the temperature of the food in it is checked and recorded on a regular basis.

**Contamination** (see *Biological/Chemical/Physical Hazards, Cross-Contamination, Intoxication*)

The presence of undesirable chemicals (e.g. detergent), foreign bodies (e.g. glass) or living organisms (e.g. *Salmonella*) in a food e.g. a cooked chicken product is contaminated with *Salmonella*.

### Control

A process of ensuring that the correct procedures are being followed (**i.e. to control**) and all necessary actions are taken to ensure a food process meets requirements (**i.e. in control**) e.g. the temperature of a beef burger is checked to ensure it has reached 75°C or equivalent (e.g. 70°C for 2 minutes) before cooking is stopped and the beef burger is served.

### Control Measure

Any action which can be taken or used to prevent a hazard or reduce it to an acceptable safe level e.g. keeping the temperature of refrigerated cooked ham at  $\leq 5^{\circ}\text{C}$ .

### Core or Centre Temperature

The temperature at the centre or thickest part of a food e.g. the core temperature of a cooked pork sausage during cooking must reach 75°C or equivalent (e.g. 70°C for 2 minutes).

### Corrective Action

The action taken when the monitoring of a critical control point indicates a potential loss of control, or when a critical limit is not met e.g. the temperature of cooked meat in a refrigerator rises to  $>10^{\circ}\text{C}$  for over 24 hours due to a technical fault in the refrigerator. The cooked meat is destroyed and the refrigerator is repaired by the manufacturer to maintain new cooked meat supplies at the correct temperature of  $\leq 5^{\circ}\text{C}$ .

### Critical Control Point (CCP)

A step in which control can be applied and is essential to prevent a food safety hazard or reduce it to an acceptable level, e.g. thorough of a raw chicken product such that the core temperature reaches 75°C or equivalent, e.g. 70°C for two minutes.

**Critical Limit** (see *Target Level, Tolerance*)

A maximum or minimum limit (i.e. value) at a CCP which can be monitored and which indicates that the food is acceptable or unacceptable, e.g. the core temperature at the centre of a cooked beef burger following cooking must reach 75° or equivalent (e.g. 70°C for 2 minutes).

**Cross-Contamination** (see *Biological Hazards, Contamination*)

The transfer of microorganisms from one source such as raw food, people, equipment or the environment to another source such as a cooked food e.g. raw meat held on the top shelf of a refrigerator drips onto a cake held on the bottom shelf and bacteria will spread from the meat to the cake.

**Danger Zone** (see *Pathogen*)

The temperature range in which most pathogenic microorganisms grow and multiply in foods e.g. between 5°C and 63°C.

**Date of Minimum Durability** (see *'Best-before' Date, 'Use-by' Date*)

The date until which a food retains its specific properties when properly stored e.g. a 'Best-before' date on a packet of crisps or a 'Use-by' date on a freshly prepared salad.

**Decision Tree** (see *Codex Alimentarius Commission, Critical Control Point*)

A series of questions used at each step, e.g. purchase, storage, cooking etc. with an identified hazard, to identify the critical control points. The most commonly used decision tree is published by the Codex Alimentarius Commission.

**Detergent** (see *Clean, Cleaning, Detergent, Sanitiser, Spore Forming, Microorganism*)

A chemical used to remove grease, dirt and food particles from a surface e.g. washing-up liquid, soap.

**Disinfectant** (see *Clean, Cleaning, Detergent, Sanitiser, Spore Forming Microorganisms*)

A chemical or process used to reduce numbers of microorganisms but not necessarily microbial spores on a surface to a safe or acceptable level e.g. chlorine (i.e. bleach), ultra-violet light.

**Endpoint Temperature** (see *Core Temperature*)

The measured temperature of a food at the end of preparation e.g. a raw beef burger is cooked to an endpoint core temperature of 75°C or equivalent, e.g. 70°C for 2 minutes.

**Enforcement Officer** (see *Competent Regulatory Authority, EHO*)

Authorised officer appointed to enforce relevant legislation e.g. environmental health officers (EHOs), sea fisheries officers, veterinary inspectors, dairy produce inspectors.

**Environmental Health Officer (EHO)** (see *Competent Regulatory Authority, Enforcement Officer*)

EHOs develop, regulate, enforce and monitor laws and regulations governing public health including food safety in order to promote good health, hygiene and environmental practices.

**Flow Diagram** (see *Hazard Analysis and Critical Control Points, Critical Control Point*)

A graphical diagram detailing the sequence of operations or steps involved with a particular food product or process, usually from receipt of raw materials to service or sale to the final consumer.

**Food**

Any substance used or intended to be used for normal human consumption e.g. water, juice, raw and cooked foods

### **Food Establishment/Business/Premises**

Any establishment that produces, stores, distributes or sells food to consumers. These establishments can include preparation, storage, distribution and retailing e.g. a caterer, retailer, a sales depot, a haulage company.

### **Food Handler**

Any person, who handles or prepares food whether packaged or unpackaged e.g. a person preparing a chicken sandwich in a cafe.

### **Food Hygiene**

All measures necessary to ensure the safety of food for sale or supply to the consumer, e.g. prevention of cross contamination between raw and ready-to-eat food.

**Food Processing** (see *Food, Food Establishment, Food Handler, High-Risk Food, Pasteurisation, Ready-to-Eat Food*)

A term commonly used to describe food which has been produced on an industrial scale e.g. frozen ready meals.

**Food Thermometer** (see *Core Temperature, Temperature Probe*)

A thermometer used to indicate temperature in foods. Food thermometers come in many forms such as digital handheld thermometers and simple insertion thermometers e.g. a meat thermometer is inserted into a pork product to indicate its temperature during cooking.

**Foodborne Illness** (see *Gastroenteritis, Foodborne Outbreak, Food Poisoning*)

Illness resulting from infection or intoxication after eating or drinking a contaminated food e.g. eating a beef burger contaminated with *E. coli* O157:H7 and becoming ill.

**Foodborne Outbreak** (see *Gastroenteritis, Foodborne Illness, Food Poisoning*)

Two or more people developing the same illness after eating or drinking the same food e.g. a number of people visit a restaurant, eat the same meal contaminated with *Salmonella* and become ill.

**Food Poisoning** (see *Gastroenteritis, Food Illness, Biological/Chemical Hazards*)

A foodborne illness resulting from the consumption of a biologically or chemically contaminated food e.g. eating a cooked chicken breast contaminated with *Salmonella* and becoming ill.

**Food Spoilage** (see *'Best-before' Date*)

Food that has decayed or decomposed due to the growth of microorganisms e.g. sour milk.



### **Fungi** (see *Moulds, Yeasts*)

A large group of living organisms with many forms which vary from very small single celled organisms (e.g. yeasts) to larger multicellular organisms (e.g. moulds, mildews and mushrooms). All fungi are incapable of photosynthesis and are therefore not plants e.g. bread mould.

### **Gastroenteritis** (see *Foodborne Illness, Foodborne Outbreak, Food Poisoning*)

A medical condition which affects the stomach and intestines, which has various causes including foodborne illness, e.g. eating shellfish contaminated with norovirus and becoming ill with symptoms of vomiting and diarrhoea.

### **Generic HACCP Plan** (see *HACCP Plan, Hazard Analysis, HACCP*)

Examples of readily available HACCP plans which can be used as guides to devise a specific HACCP plan for a specific individual process.

### **Good Manufacturing Practice (GMP)** (see *SOP, Specification*)

The minimum quality and safety requirements aimed at ensuring that foods are prepared in a consistent manner according to agreed specifications e.g. raw and cooked food products are stored in separate refrigerators.

### **HACCP Plan/System**

A food or process specific document written according to the principles of HACCP to ensure the control of hazards which are significant for the safety of that food e.g. a HACCP plan to control the safety of food in a catering business.

### **Hazard** (see *Biological, Chemical, Physical Hazards*)

The potential to cause harm. Hazards (i.e. dangers) may be biological, chemical or physical e.g. *Salmonella* in cooked chicken (biological hazard), detergent in milk (chemical hazard) or glass in a breakfast cereal (physical hazard).

### **Hazard Analysis** (see *HACCP, Hazard*)

A procedure for looking at a specific food process, identifying all hazards associated with that process and deciding which are significant to food safety and as such should be included in a HACCP plan e.g. the cross-contamination of a cooked chicken breast with *Campylobacter* bacteria from raw chicken is identified as a hazard due to poor hygiene practice.

### **Hazard Analysis and Critical Control Point (HACCP)**

(see *CCP, Hazard, Hazard Analysis*)

A system that identifies, evaluates and controls hazards (i.e. dangers) which are significant to a food's safety e.g. HACCP for a food business identifies the hazards associated with the operations in that business and identifies how those hazards can be controlled.

### **High-Risk Activity** (see *High-Risk Foods*)

Activities where high-risk foods are prepared and where the potential exists to put vulnerable people, (i.e. infants, the frail elderly, pregnant women and the sick) or large numbers of consumers at serious risk e.g. a street vendor selling unpackaged ready-to-eat ham sandwiches from an un-refrigerated service unit.

### **High-Risk Food** (see *Pathogen, Ready-to-Eat Food*)

Food which can support the growth of dangerous organisms (i.e. pathogens) and which will not be subjected to any further processing (e.g. cooking) which would destroy or reduce numbers of such organisms to a safe level prior to consumption e.g. raw seafoods, freshly prepared salads, some meats and dairy products.

### **Implementation**

The initial and ongoing use and updating of a HACCP plan.

### **Infection** (see *Foodborne Illness, Pathogen, Microorganism*)

An illness that results from, eating food contaminated with pathogenic organisms, e.g. salmonellosis (i.e. the illness caused by *Salmonella*).



**Infective Dose** (see *Foodborne Illness, Pathogen, Microorganism*)

The minimum number of a specific organism which is needed to cause an illness e.g. some evidence suggests that the infective dose of *E. coli* O157:H7 is less than 10 individual microbial cells.

**Inspection** (see *Audit*)

An internal or external examination of a food, food process, quality or food safety system such as HACCP, in order to establish compliance with specific business, regulatory or legislative requirements e.g. an inspection of a restaurant by an EHO to ensure that hygiene regulations are been complied with.

**Intoxication** (see *Foodborne Illness, Pathogen, Microorganism, Toxin*)

An illness that results from eating food containing toxic chemicals or toxins produced by pathogenic microorganisms e.g. Botulism caused by eating a canned food containing the toxin produced by the microorganism *Clostridium botulinum*.

**Low-Risk Activity**

Activity where the potential to cause harm to consumers is low e.g. selling pre-packed chocolate bars in a newsagent.

**Material Safety Data Sheets (MSDS)**

Documents which contain safety information about specific substances. An MSDS must be available for every chemical found in the work place and are available from the chemical supplier or manufacturer e.g. an MSDS for sodium hypochloride commonly found in bleach products used in disinfection procedures.

**Monitoring** (see *Control Limit, Critical Control Points*)

The systematic observation, measurement and recording of the significant factors for control of a hazard at CCPs and assessing whether a CCP is under control e.g. recording the final cooking temperature of a cooked chicken breast.

**Moulds** (see *Fungi, Yeasts*)

A group of multicellular fungi used in the production of foods (e.g. cheese) and also responsible for the spoilage of some foods (e.g. bread mould).

**Microorganism** (see *Bacteria, Biological Hazards, Contamination, Pathogen, Parasite, Virus*)

A life-form that generally cannot be seen with the naked eye e.g. bacteria, viruses, yeasts, moulds and parasites.

**Non-Conforming Product/Non-Conformity**

A product or procedure that does not meet the required standard or specification.

**Parasite**

A life-form that grows and feeds in or on a host life form without contributing to the well being of the host but not necessarily causing disease e.g. *Trichinella spiralis* is a parasitic worm which causes human illness, commonly associated with eating undercooked pork.

**Pasteurisation** (see *Pathogen, Spore Forming, Microorganism, Vegetative Microorganisms*)

A heat treatment applied to food to destroy vegetative pathogenic microorganisms (i.e. not spores) and reduce numbers of other microorganisms to decrease the rate of spoilage e.g. raw milk is pasteurised by heating to 72°C for 15 seconds.

**Pathogen/Pathogenic** (see *Biological Hazard, Spore Forming, Vegetative Microorganisms*)

A microorganism that is capable of causing illness or disease e.g. *Salmonella*, *Campylobacter*, *E. coli* O157, *Listeria monocytogenes*, norovirus, etc.

**Perishable Food** (see *High-Risk Food, Ready-to-Eat Food, Shelf-Life*)

A term applied to food with a short shelf-life which includes high-risk foods e.g. freshly prepared coleslaw.

**Physical Hazard(s)** (see *Contamination, Biological/Chemical Hazards*)

Materials (e.g. glass or metal fragments) that may cause harm if consumed in foods e.g. piece of glass in a breakfast cereal.

### **Personal Hygiene**

Individual cleanliness and practices of cleanliness or personal care e.g. washing hands with soap and hot water after using the toilet.

### **Potable Water**

Water which is fit for human consumption or for use in food preparation and complies with the requirements of current legislation (i.e. Irish Statutory Instrument No. 278 of 2007) e.g. treated mains water.

### **Prerequisites (Prerequisite Hygiene Requirements)**

Hygiene practices and procedures required prior to and during the implementation and ongoing operation of a HACCP system e.g. premises, equipment, staff training, pest control, waste management.

### **Quality Assurance** (see *Accreditation, Audit, Calibration, Control*)

A system which endeavours to maintain the quality and safety aspects of a food from preparation, production, storage, distribution through to final consumption e.g. An Bord Bia Egg Quality Assurance Scheme

### **Raw Materials** (see *Specification*)

All foods used as foods themselves or ingredients in other foods, including those which have been pre-cooked or packaging and food contact materials e.g. water, meat, vegetables, eggs, salt.

### **Ready-to-Eat Foods** (see *High-Risk Foods*)

Any food (including beverages) which is normally consumed in its raw state or food which has been cooked or processed and does not require further cooking or processing to ensure its safety e.g. coleslaw, cooked sliced meats and smoked salmon.

### **Records**

Evidence, written or otherwise, e.g. electronic, of a working HACCP system and its prerequisites e.g. cooking temperatures, delivery or cleaning records.

### **Risk** (see *High-Risk Foods, Risk Assessment*)

The probability of a hazard occurring e.g. the risk of a cooked pork sausage not reaching the correct temperature during a defined cooking time.

### **Risk Assessment** (see *High-Risk Foods, Risk*)

A process of identifying hazards, assessing risks, gauging severity and evaluating their significance.

### **Sanitary** (see *Cleaning/Sanitation Schedule, Disinfectant, Sanitiser*)

A surface which is free from pathogens and other hazardous (i.e. dangerous) substances.

### **Sanitation Schedule** (see *Cleaning Schedule, Disinfectant, Sanitary, Sanitiser*)

A cleaning schedule followed by disinfection of all surfaces.

### **Sanitiser** (see *Disinfectant, Sanitary, Sanitation Schedule*)

A chemical or process used to clean and reduce numbers of microorganisms on a surface e.g. chlorine, ultra violet light.

### **Severity**

The seriousness or magnitude of a specific hazard or its consequences.

### **Shelf-Life** (see *'Best-before' Date, Food Spoilage, 'Use-by' Date, Date of Minimum Durability*)

The period of time during which a food will remain edible (i.e. 'Best-before' date) and microbiologically safe (i.e. 'Use-by' date) to consume.

### **Specification** (see *Food, Raw Material, SOP*)

A written document (i.e. usually between supplier and customer) which defines the standards which separate acceptability from unacceptability for a specific ingredient or food product e.g. pre-packed sliced cooked ham will have a meat content of 90% and be free of all pathogens.

**Spore Forming Microorganism** (see *Vegetative Microorganism*)

Microorganisms that can form resistant, inactive, spores inside their vegetative cells called endospores. Endospores can survive normal cooking. The spore state is a dormant stage or period of no growth. Under favourable conditions spores can produce a vegetative microbial cell which can subsequently grow and multiply in the food e.g. species of *Bacillus* and *Clostridium* bacteria can produce endospores.

**Standard Operating Procedure (SOP)**

(see *Good Manufacturing Practices, Specification*)

A practiced procedure of controlling a food operation in accordance with agreed specifications to obtain a safe quality food product. SOPs are essential food safety practices that should already be in place as a prerequisite before and after a HACCP plan is implemented e.g. a written SOP on how to safely cook a beef burger.

**Step**

Any point, procedure, operation, action or stage in the preparation and delivery of a food to the final consumer e.g. cooking is a step in the preparation of a cooked chicken sandwich.

**Sterile/Sterilise** (see *Commercially Sterile, Microorganism*)

Free from all living (i.e. viable) organisms.

**Stock Rotation** (see *'Best-before', Date of Minimum Durability, 'Use-by' Date*)

The practice of moving (rotating) food stocks so that stocks with the closest approaching 'Best-before' or 'Use-by' date are used first.

**Target Level** (see *Control Measure, Critical Limit*)

This is a more stringent limit for a control measure at a critical control point than the critical limit itself. Target levels can be applied at CCPs to ensure that action can be taken prior to the actual critical limit being exceeded, thereby avoiding the need for more series corrective action e.g. if the critical limit for refrigerated storage of raw chicken is 5°C then the target level might be 3°C.

**Temperature Control** (see *Danger Zone, End Point Temperature, High Risk Foods, Pathogen, Temperature Probe*)

The practice of storing foods, particularly high-risk foods, outside the temperature range in which microorganisms, particularly pathogens, will grow best e.g. storing coleslaw in the refrigerator at ≤5°C.

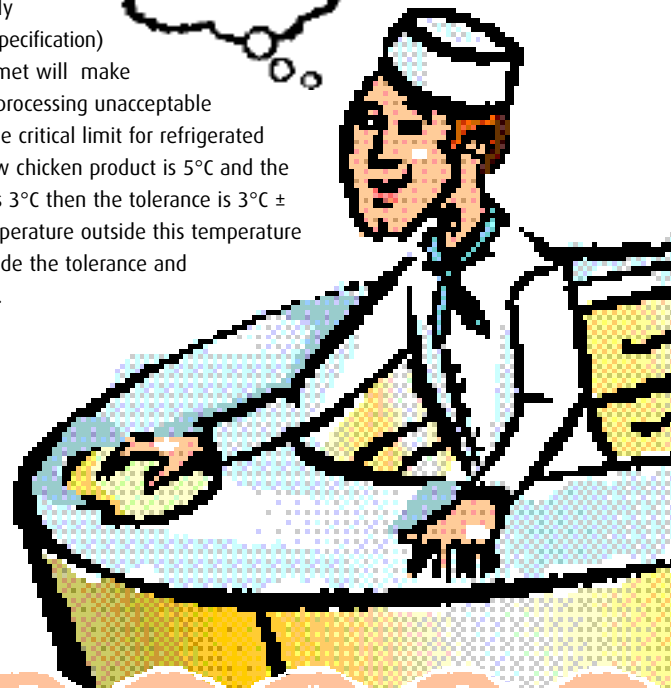
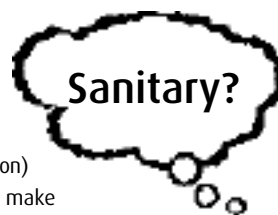
**Temperature Probe** (see *Monitoring*)

The part of temperature measuring equipment that is used to physically make temperature readings e.g. inserting a temperature probe into a chicken product to monitor temperature during cooking.

**Tolerance** (see *Calibration, Critical Limit, Specification, Target Level*)

A specified level or degree of latitude set between the target level and the critical limit (normally defined in a specification)

which if not met will make a food or its processing unacceptable e.g. where the critical limit for refrigerated storage of raw chicken product is 5°C and the target level is 3°C then the tolerance is 3°C ± 2°C. Any temperature outside this temperature range is outside the tolerance and unacceptable.



### **Toxic Materials**

(see *Biological, Chemical, Physical Hazards, Intoxication, Toxin*)

These are poisonous substances that are not intended for human consumption e.g. pesticides, metals such as mercury and lead.

**Toxin** (see *Biological, Chemical, Physical Hazards, Intoxication*)

A toxin is a chemical (i.e. poison) that will cause illness and may be found in food naturally or due to biological, chemical or physical contamination e.g. Botulism, a form of food poisoning (i.e. intoxication) is the result of ingestion of the toxin produced by *Clostridium botulinum*.

### **Traceability**

The ability of a food business to follow a product batch and its raw materials from the preparation process through to the consumer and backwards to the raw materials suppliers e.g. bar-coding products, batch numbers.

**'Use-by' Date** (see *'Best-before' Date, Date of Minimum Durability, High-Risk Foods, Ready-to-Eat Food*)

The date up until a food can reasonably be expected to be safe to consume if kept under the correct storage conditions. 'Use-by' dates are more about safety than quality, e.g. high-risk foods such as prepared salads, meat and dairy products have 'use-by' dates.

**Validation** (see *Control, Records, Monitoring, Specification, Traceability etc*)

Obtaining evidence that the elements of a HACCP plan are effective e.g. microbiological examination of equipment surfaces before and after sanitation to determine if the sanitation procedure was effective in reducing numbers of microorganisms to desired levels.

**Vegetative Microorganism** (see *Spore Forming Microorganism*)

A form in which a microorganism is able to grow, given the correct conditions. Unlike spores, vegetative cells are relatively poor at surviving environmental stresses such as high temperature e.g. *Salmonella* bacteria are vegetative cells and do not produce spores.

**Verification** (see *Compliance, Conformity, Monitoring, Traceability, Validation etc*)

The application of methods, procedures, other evaluations, in addition to monitor determine compliance with a HACCP plan. A regular check to ensure that monitoring at CCPs is taking place and where critical limits are exceeded corrective actions are actually being taken.

**Virus** (see *Bacteria, Biological Hazard, Foodborne Illness, Pathogen*)

A simple, microscopic life form which requires a living host for reproduction and can cause human illness e.g. norovirus in shellfish or water.

**Vulnerable Groups** (see *High-Risk Foods*)

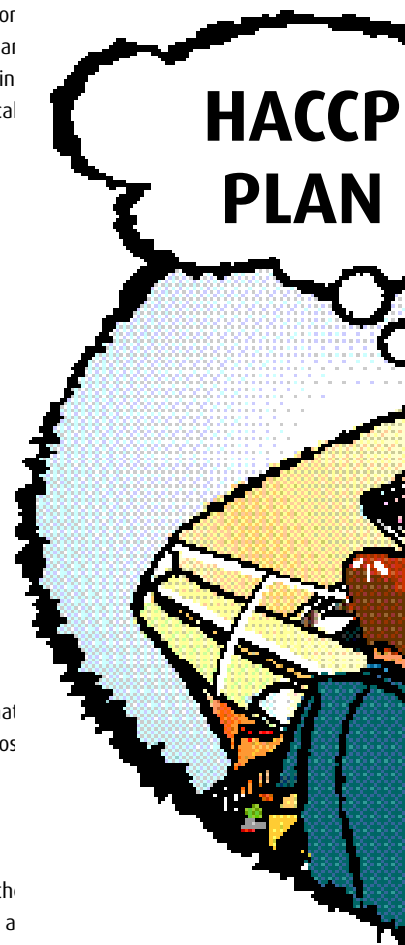
These are people who are more susceptible than others to foodborne illness e.g. the very young, the frail elderly, pregnant women or people suffering from illnesses.

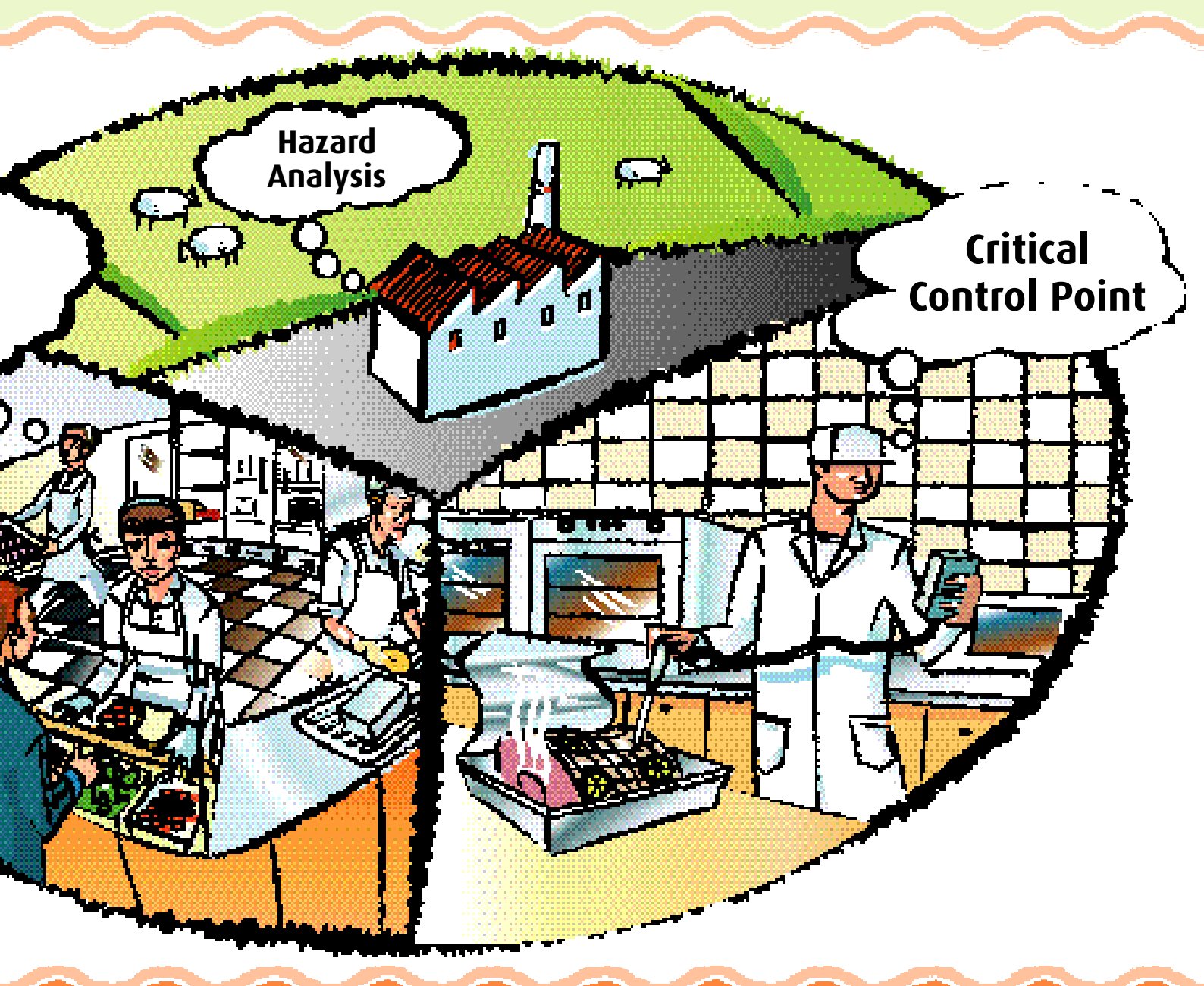
### **Waste**

Any product, packaging or materials that are unwanted and intended to be disposed of and removed from a food area or establishment.

**Yeasts** (see *Fungi, Moulds*)

A group of single celled fungi used in the production of some foods (e.g. beer, wine, bread) and are responsible for the spoilage of foods (e.g. beer, wine).







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  - Cleaning (*see Clean, Cleaning Schedule*)
  - Cleaning Schedule (*see Disinfectant, Sanitation Schedule, Sanitiser, Sanitary*)
  - Commercially Sterile (*see Sterile*)
  - Competent Regulatory Authority (*see Enforcement Officer, Environmental Health Officer*)
  - Compliance
- Conformity
- Contamination (*see Biological/Chemical/Physical Hazards, Cross-Contamination, Intoxication*)
- Control
- Control Measure
- Core or Centre Temperature
- Corrective Action
- Critical Control Points (CCPs)
- Critical Limit (*see Target Level, Tolerance*)
- Cross-Contamination (*see Biological Hazards, Contamination*)
- D**
- Danger Zone (Pathogen)
  - Date of Minimum Durability (*see 'Best-before' Date, 'Use-by' Date*)
  - Decision Tree (*see Checklist, Critical Control Point*)
  - Detergent (*see Clean, Cleaning, Disinfectant, Sanitiser*)
  - Disinfectant (*see Detergent, Sanitiser, Spore Forming Microorganism*)
- E**
- Endpoint Temperature (*see Core Temperature*)
  - Enforcement Officer (*see Competent Regulatory Authority, Environmental Health Officer*)
  - Environmental Health Officer (*see Competent Regulatory Authority, Enforcement Officer*)
- F**
- Flow Diagram
  - Food
  - Food Establishment/Business/Premises
- Food Handler
- Food Hygiene
- Food Processing (*see Food, Food Establishment, Food Handler, Pasteurisation, Ready-to-Eat Food*)
- Food Thermometer (*see Core Temperature, Temperature Probe*)
- Foodborne Illness (*see Gastroenteritis, Foodborne Outbreak, Food Poisoning*)
- Foodborne Outbreak (*see Gastroenteritis, Foodborne Illness, Food Poisoning*)
- Food Poisoning (*see Gastroenteritis, Food Illness, Biological/Chemical Hazards*)
- Food Spoilage (*see 'Best-before' Date*)
- Fungi (*see Moulds, Yeasts*)
- G**
- Gastroenteritis (*see Foodborne Illness, Foodborne Outbreak, Food Poisoning*)
  - Generic HACCP Plan (*see HACCP Plan, Hazard Analysis, HACCP*)
  - Good Manufacturing Practice (GMP) (*see SOP, Specification*)
- H**
- HACCP Plan (System)
  - Hazard (*see Biological, Chemical, Physical Hazards*)
  - Hazard Analysis (*see HACCP, Hazard*)
  - Hazard Analysis and Critical Control Point (HACCP) (*see CCP, Hazard, Hazard Analysis*)
  - High-Risk Activity (*see High-Risk Foods*)
  - High-Risk Food (*see Pathogen, Ready-to-Eat Food*)

**I**

Implementation  
 Infection (see *Foodborne Illness, Pathogen, Microorganism*)  
 Infective Dose (see *Foodborne Illness, Pathogen, Microorganism*)  
 Inspection (see *Audit*)  
 Intoxication (see also *Foodborne Illness, Pathogen, Microorganism, Toxin*)

**L**

Low-Risk Activity

**M**

Material Safety Data Sheets (MSDS)  
 Microorganism (see *Bacteria, Biological Hazards, Contamination, Pathogen, Parasite, Virus*)  
 Monitoring (see *Control Limit, Critical Control Point*)  
 Moulds (see *Yeasts*)

**N**

Non-Conforming Product/Non-Conformity

**P**

Parasite  
 Pasteurisation (see *Pathogen, Spore Forming, Microorganism, Vegetative Microorganisms*)  
 Pathogen/Pathogenic (see *Biological Hazard, Spore Forming, Vegetative Microorganisms*)  
 Perishable Food (see *High-Risk Food, Ready-to-Eat Food, Shelf-Life*)  
 Personal Hygiene  
 Physical Hazard(s) (see *Contamination, Biological/Chemical Hazards*)  
 Potable Water  
 Prerequisites

**Q**

Quality Assurance (see *Accreditation, Audit, Calibration, Control*)

**R**

Raw Materials (see *Specification*)  
 Ready-to-Eat Foods (see *High-Risk Foods*)  
 Records  
 Risk (see *High-Risk Foods, Risk Assessment*)  
 Risk Assessment (see *High-Risk Foods, Risk*)

**S**

Sanitary (see *Cleaning/Sanitisation Schedule, Disinfectant, Sanitiser*)  
 Sanitation Schedule (see *Cleaning Schedule, Disinfectant, Sanitary, Sanitiser*)  
 Sanitiser (see *Disinfectant, Sanitary, Sanitation Schedule*)  
 Severity  
 Shelf-Life (see *'Best-before' Date, Food Spoilage, 'Use-by' Date, Date of Minimum Durability*)  
 Standard Operating Procedure (SDP) (see *Good Manufacturing Practices, Specification*)  
 Step  
 Sterile/Sterilise (see *Commercially Sterile, Microorganism*)  
 Specification (see *Food, Raw Material, SOP*)  
 Spore Forming Microorganism (see *Vegetative Microorganism*)  
 Stock Rotation (see *'Best-before' Date, Date of Minimum Durability, 'Use-by' Date*)

**T**

Target Level (see also *Control Measure, Critical Limit, Tolerance*)  
 Temperature Control (see *Danger Zone, End Point Temperature, High-Risk Foods, Temperature Probe*)  
 Temperature Probe (see *Monitoring*)  
 Tolerance (see *Calibration, Critical Limit, Specification, Target Level*)  
 Toxic Materials (see *Biological, Chemical, Physical Hazards, Intoxication, Toxin*)  
 Toxin (see *Biological, Chemical, Physical Hazards, Intoxication*)  
 Traceability

**U**

'Use-by' Date (see also *'Best-before' Date, Date of Minimum Durability, High-Risk Foods, Ready-to-Eat Food*)

**V**

Validation (see *Control, Records, Monitoring, Specification, Traceability etc*)  
 Vegetative Microorganism (see *Spore Forming Microorganism*)  
 Verification (see *Compliance, Conformity, Control, Monitoring, Traceability, Validation etc*)  
 Virus (see *Bacteria, Biological Hazard, Foodborne Illness, Pathogen*)  
 Vulnerable Groups (see *High-Risk Foods*)

**W**

Waste

**Y**

Yeast (see *Moulds*)



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