

The HACCP Course © Glossary

Ambient (Room) Temperature (*see Danger Zone, End Point Temperature*)

The temperature of the surrounding working environment.

Analyze/Analysis

A detailed examination; i.e. test of a food, process, or area. For instance: a laboratory carries out an analysis of a cooked chicken burger to determine its fat content.

Antimicrobial

A process or chemical designed to reduce or stop microorganisms from growing.

Approved Source/Supplier/Vendor

A reputable or reliable supplier of materials or services used in the preparation of a food. Usually licensed or monitored for compliance to standard practices.

Assessment

(*See Audit, 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. These are normally conducted by a local consultant such as **FMT LLC**, but can be carried out by a business themselves.

Audit (*see Inspection*)

An audit is a systematic and independent process of collecting information about a particular businesses HACCP plan, and evaluating this information objectively, for the purpose of reporting on the level of compliance between the collected information and established HACCP compliance standards.

An audit can involve looking at paperwork and actual working procedures.

Bacteria (*see Microorganism*)

Single-celled living organisms which cannot be seen with the naked eye. For instance: *salmonella* bacteria.

Bactericide

A chemical or process designed to destroy bacteria. For instance: chlorine based Sanitizer.

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

The date a food can reasonably be expected to retain its best quality if kept under correct storage conditions, as determined by the manufacturer. 'Best-before' dates are more about quality than safety. For instance: canned and dried foods

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

Living organisms, (pathogenic bacteria), which may cause harm if they or their by-products are consumed in food. For instance: *Salmonella* bacteria 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. For instance: a temperature probe for a freezer is calibrated to a national standard to have an accuracy of plus or minus 2°F.

Carrier (Asymptomatic Carrier) A person who harbors disease causing organisms inside their bodies and excretes them without suffering from symptoms of that disease . For instance: a person recovering from *salmonella* food poisoning.

Certification

A procedure by which a recognized body, following its own independent assessment, determines whether a business complies with the requirements of a recognized standard.

Checklist (*see Decision Tree*)

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

Chemical Hazard(s)

Chemicals, (poisons), which may cause harm if consumed. For instance: bleach in milk.

Clean (*see Cleaning, Cleaning Schedule*)

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. For instance: scrubbing down a food chopping board.

Cleaning Schedule (*see, Sanitation Schedule, Sanitizer, Sanitary*)

A written schedule used to describe all items which must be cleaned and made free of soil, food residues, dirt, grease, and other undesirable debris. The schedule has details of what needs to be cleaned, who will do the cleaning, how the item will be cleaned, and when cleaning will take place. For example: a meat slicer must be cleaned every day, by the shop assistant, by removing all parts and cleaning them with detergent in the 3 compartment sink.

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. For instance: canned foods.

Competent Regulatory Authority

The organization with responsibility to enforce and ensure compliance with recognized standards and/or the requirements of legislation. For example: The FDA or a State regulatory agency.

Compliance

Meeting all the requirements of a recognized standard. A prerequisite of compliance in the food industry is ensuring that the statutory requirements of legislation are met or exceeded.

Conformity

All actions in relation to particular guidelines, standards, or legislation, which are carried out according to established procedures. For instance: the temperature of a refrigerator is maintained at 41°F, and the temperature of the food in it is recorded on a daily 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* bacteria) in a food. For instance raw chicken product is contaminated with *salmonella* bacteria.

Control

A process of ensuring that the correct procedures are being followed and all necessary actions are taken, to ensure a food process meets requirements. For example: the temperature of a beef burger is checked to ensure it has reached 155°F for 15 seconds, before cooking is stopped and the beef burger is served.

Control Measure

Any action at a control point, which can be taken or used to prevent a hazard, or reduce it to an acceptable safe level. For example: keeping the temperature of cooked ham at $\leq 41^\circ\text{F}$.

Control Point

A point or step in a food process where a control measure can be applied. For instance: temperature measurement of a refrigerated storage unit.

Core or Center Temperature

The temperature at the center or thickest part of a food. For instance: the core temperature of cooked chicken during cooking must reach 165°F.

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.

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. For instance: cooking time and temperature for a raw chicken product.

Critical Limit (*see Target Level, Tolerance*)

A maximum or minimum limit, (value), at a CCP which can be monitored, and separates acceptable from unacceptable. For instance: the core temperature at the center of a cooked beef burger following cooking must reach 155° for a minimum of 15 seconds.

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. For instance: raw meat held on the top shelf of a refrigerator drips onto a cake held on the bottom shelf; therefore, bacteria spread from the meat to the cake.

Danger Zone (*see Pathogen*)

The temperature conditions or temperature ranges, under which most pathogenic microorganisms may grow and multiply in foods. For instance: bacteria growth occurs between 41°F and 135°F.

Date of Minimum Durability (*'Use-by' Date*)

The date until which a food retains its specific properties when properly stored.

Decision Tree (*see Checklist, Critical Control Point*)

A series of questions used at each step with an identified hazard, in the preparation of a food to identify the critical control points.

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

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

Disinfectant (see *Clean, Cleaning, Detergent, Sanitizer, 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. For instance: chlorine (bleach), or ultra-violet light.

Endpoint Temperature (see *Core Temperature*)

The measured temperature of a food at the end of preparation. For example: a raw lamb kebab is cooked to an endpoint core temperature of 155°F for 15 seconds.

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

Authorized officer appointed to enforce relevant legislation. For instance: Food/health inspectors.

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

A graphical diagram detailing the sequence of operations involved with a particular food product or process, usually from receipt of raw materials to the final consumer. In HACCP these charts can help identify the CCPs. For instance: a flow diagram showing the sequence of steps in the preparation of a cooked chicken breast sandwich.

Food

Any substance used or intended to be used for normal human consumption.

Food Establishment/Business/Premises

Any establishment that manufactures, produces, stores, distributes, or sells food to consumers. These establishments can include: preparation, storage, distribution, and retailing. For instance: caterers, retailers, a sales depot, or a haulage company.

Food Handler

Any person who handles or prepares food, whether packaged or unpackaged. For instance: a person preparing a chicken sandwich in a cafeteria.

Food Hygiene

All measures necessary to ensure the safety and quality of food for sale or supply to the consumer. For instance: food preparation, processing, storage, distribution, handling, display, and retail.

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

A term commonly used to describe food which has been produced on an industrial scale. For instance: frozen ready meals.

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

A measuring device used to indicate temperature in foods. Food thermometers come in many forms such as: digital handheld thermometers, and simple insertion thermometers. For instance: 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 contaminated food. For instance: eating a beef burger contaminated with *E. coli* O157:H7 and becoming ill.

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

Two or more unrelated people developing the same illness after eating or drinking the same food. For instance: a number of people visit a restaurant, eat the same meal contaminated with *salmonella* bacteria, 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. For instance: eating a cooked chicken breast contaminated with *salmonella* bacteria and becoming ill.

Food Spoilage (see 'Best-before' Date)

Food that has decayed or decomposed due to the growth of microorganisms. For instance: sour milk.

Fungi (see Moulds, Yeasts)

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

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

A medical condition which affects the stomach and intestines, commonly associated with foodborne illness. For instance: eating shellfish contaminated with Norwalk-like virus and becoming ill with symptoms of diarrhea, nausea, and vomiting.

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. For instance: 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. For instance: a HACCP plan for a cooked ham sandwich.

Hazard (see Biological, Chemical, Physical Hazards)

The potential to cause harm. Hazards (dangers) may be biological, chemical, or physical. For instance: *Salmonella* species in a chicken burger (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. These identified hazards should be included in a HACCP plan. For instance: the cross-contamination of campylobacter bacteria from raw chicken to a cooked chicken breast can be identified as a hazard due to poor hygienic practices, (improper handwashing).

Hazard Analysis and Critical Control Point (HACCP) (see CCP, Hazard, Hazard Analysis)

A system that identifies, evaluates, and controls hazards which are significant to a foods safety. For instance: a HACCP plan identifies a hazard in the preparation of a cooked pork sausage as the possible continued growth of *Salmonella* bacteria, and sets a CCP as to the cooking time and temperature. Careful monitoring of the temperature and time will help to control and prevent *salmonella* growth.

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

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

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

Foods which can support the growth of dangerous organisms (pathogens), and which will not be subjected to any further processing (cooking), which would destroy or reduce numbers of such organisms to a safe level prior to consumption. For instance: raw seafood's, freshly prepared salads, and some meats and dairy products.

Implementation

The initial 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. For instance: salmonellosis illness.

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

The minimum number of a specific organism which is needed to cause an illness. For instance: 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, or quality or food safety system, (such as HACCP), in order to establish compliance with specific business, regulatory, or legislative requirements. For instance: an inspection of a restaurant by a food inspector to ensure compliance with hygienic regulations.

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

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

Low-Risk Activity

Activity where the potential to cause harm to consumers is low. For instance: selling pre-packed chocolate bars in a gas station.

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. For instance: a MSDS should be available 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. For instance: recording the final cooking temperature and time for a cooked chicken breast.

Molds (*see Fungi, Yeasts*)

A group of multicellular fungi used in the production of foods, such as cheeses. Molds can also be responsible for the spoilage of some foods, such as bread.

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

A life-form that generally cannot be seen with the naked eye. For instance: bacteria, viruses, yeasts, molds 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 does not necessarily cause disease. For example, *Trichinella spiralis* is a parasitic worm which causes human illness. It is commonly associated with eating undercooked pork.

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

A heat treatment applied to food to destroy vegetative pathogenic microorganisms, (not spores). Pasteurization also reduces the number of other microorganisms which can cause spoilage in dairy and egg products. For example: raw milk is pasteurized

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

A microorganism that is capable of causing illness or disease. For instance: *Salmonella*, *E. coli* O157 bacteria, viruses, and parasites.

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. For instance: freshly prepared coleslaw.

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

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

Personal Hygiene

Individual cleanliness, and practices of cleanliness or personal care. For instance: 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.

Prerequisites (Prerequisite Hygiene Requirements)

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

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

A system which endeavors to maintain the quality and safety aspects of a food from preparation, production, storage, and distribution, through to final consumption

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. For instance: water, meat, vegetables, eggs, and salt.

Ready-to-Eat Foods (RTF's) (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. For instance: coleslaw, cooked sliced meats, and smoked salmon.

Records

Evidence, written or otherwise, of a working HACCP system and its prerequisites. For instance: cooking temperatures, or delivery or cleaning records.

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

The probability of a hazard occurring. For instance: the risk of a cooked chicken 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, Sanitizer*)

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

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 in good condition or edible.

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. For instance: a written SOP on how to safely clean & sanitize food contact surfaces.

Step

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

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

Free from all living (viable) organisms.

Sanitation Schedule (see *Cleaning Schedule, Disinfectant, Sanitary, Sanitizer*)

A cleaning schedule followed by the sanitization of all surfaces.

Sanitizer (see *Disinfectant, Sanitary, Sanitation Schedule*)

A chemical or process used to clean and reduce the numbers of microorganisms on a surface to a safe level. For instance: chlorine, or ultra violet light.

Severity

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

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

A written document (usually between supplier and customer), which defines the standards which separates acceptable from unacceptable for a specific ingredient or food product. For instance: 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 favorable conditions spores can produce a vegetative microbial cell which can subsequently grow and multiply in the food. For instance: species of *Bacillus* and *Clostridium* bacteria can produce endospores.

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

The practice of moving (rotating) food stocks, so that stocks with the closest approaching or "use-by" date (oldest), 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 a CCP so as to ensure that action can be taken prior to the actual critical limit being exceeded, thereby avoiding the need for more series corrective action . For instance: if the critical limit for refrigerated storage of raw chicken is 41°F then the target level might be 38°F.

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 temperatures in which microorganisms, particularly pathogens, will grow best. For instance: storing coleslaw in the refrigerator at $\leq 41^{\circ}\text{F}$.

Temperature Probe (see *Monitoring*)

The part of a temperature measuring device that is used to physically make temperature readings. For instance: 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. For instance: where the critical limit for refrigerated storage of raw chicken product is 41°F and the target level is 38°F, then the tolerance is 3°F . Any temperature outside this temperature range is outside the acceptable tolerance.

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

These are poisonous substances that are not intended for human consumption. For instance: pesticides, and metals such as mercury and lead.

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

A toxin is a chemical (poison), which will cause illness, and may be found in food naturally or due to biological, chemical, or physical contamination. For example: Botulism, a form of food poisoning (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. For instance: bar-coding products, and/or batch numbers.

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

The date a manufacturer specifies that 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. For instance: high-risk foods such as prepared salads, meats, and dairy products.

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

Obtaining evidence that the elements of a HACCP plan are effective. For instance: 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 endospores, vegetative cells are relatively poor at surviving environmental stresses such as high temperature. For instance: *salmonella* bacteria are vegetative cells and don't produce endospores.

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

The application of methods, procedures, tests, and other evaluations, in addition to monitoring, to determine compliance with a HACCP plan. For instance: 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. For instance: Norwalk-like virus in shellfish or water.

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

These are people, who are more susceptible than others to foodborne illness. For instance: the very young, the very old, pregnant women, or people suffering from illnesses.

Waste

Any product, packaging, or materials that are unwanted, and are 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. (For instance: beer, wine, bread). Yeasts can also be responsible for the spoilage of foods. (For instance: fruit juice, beer, wine).

YOPI (see *vulnerable Groups, High-Risk Foods*)

People who are more susceptible than others to foodborne illness

*Y*oung

*O*ld

*P*regnant

*I*mmune Compromised