



EHEDG Glossary

Version 2020/08.G04

This document replaces the "Definitions of expressions relevant to hygienic processing and plant design" dated May 1991, amended Dec 1993 and Dec 2003 and the Glossary Version 2004/04 G01, its update version 2012/06 G02 and 2013/12 G03.

The definitions are presented to provide uniform general interpretation of terms, phrases and expressions used in EHEDG guideline documents and publications. Where relevant, definitions established by official standards bodies have been adopted. Some of these definitions may be qualified for use in specific guideline documents.

Aseptic equipment	<p>Hygienically designed equipment that is sterilizable and is impermeable to microorganisms to maintain its aseptic status.</p> <p>Note 1: This definition may apply to small items such as specially designed fittings or mechanical seals as well as larger fully integrated equipment such as filling machines.</p> <p>Note 2: This definition refers primarily to microorganism tightness.</p> <p>Note 3: See Aseptic process, Sterilization</p>
Aseptic process	<p>A process using equipment sterilized before use, and which, in running conditions, is protected against recontamination by microorganisms.</p> <p>Note 1: This definition applies to the linking of one or more properly designed aseptic items with properly designed aseptic transfer components to assure total microorganism tightness of the linked items.</p> <p>Note 2: See Aseptic equipment, Sterilization</p>
Associated equipment	<p>All equipment associated with a machine, not defined as machinery (ISO 14159, section 3.13), that is essential to the functioning of the machine for it to hygienically process a product (e.g. fittings, piping, tubing).</p> <p>Note 1: For EHEDG purposes, this may also include such items as cappers and labellers associated with fillers or pulsation dampeners used with positive displacement type pumps.</p>
Barrier	<p>Structure, construction or fabricated component providing protection or used to affect movement.</p>
Sluice	<p>Note 1: This definition may apply to the construction or fabrication techniques used to separate different levels of zones or areas within a building, process, or complex piece of equipment using seals or gaskets.</p>
Transfer Zone	<p>Note 2: Barriers in food processing areas should be in conformance to hygienic design principles.</p>
Hygiene Barrier	<p>Note 3: See Risk, Risk management, Zoning</p>

Biofilm(s)	<p>An organic film that is formed due to interaction of microorganisms and organic substances on surfaces, covered with an extracellular matrix, in which the cells tend to have high resistance to chemicals, compared to freely-suspended cells.</p> <p>Note 1: See Contamination, Soil</p>
Bond	<p>The adhesive or cohesive forces holding materials together. This definition excludes press and shrink fits.</p>
Burr	<p>A thin ridge or sharp area remaining after cutting, drilling, shearing, or punching a material.</p>
CCP (critical control point)	<p>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)</p> <p>Note 1: All CCP must be monitored and corrective action taken in case of deviation.</p> <p>Note 2: See HACCP (Hazard Analysis Critical Control Point), Corrective action</p>
Certification	<p>An attestation of an item that is in conformance with published documents recognized by the certifying organization.</p> <p>Note 1: For EHEDG purposes, this means the use of EHEDG Guidelines and Test methods properly applied.</p>
CIP (cleaning-in-place)	<p>A system that cleans solely by impingement, circulating and/or flowing chemical detergent solutions and water rinses by mechanical means onto and over surfaces to be cleaned, without dismantling of equipment specifically designed for this method of cleaning.</p> <p>Note 1: CIP efficiency depends on 5T's – time, temperature, titration, turbulence and technology.</p> <p>Note 2: When CIP is done on dry processing equipment, it should be designed to preclude any water from passing into the environment.</p> <p>Note 3: See Wet cleaning, COP (cleaning-out-of-place), Manual cleaning, Dry cleaning</p>



Clean	Free from soil. Note 1: See Soil
Cleaning	The removal of soil (e.g. food residues, dirt, grease or other objectionable or unwanted matter). Note 1: See Soil
Cleaning validation	Obtaining the documented evidence that cleaning with or without disinfection processes, if properly implemented, is consistently effective at achieving a predefined level of hygiene on product contact surfaces identified during the hazard evaluation.
Cleanroom	Room in which the concentration of airborne particles is controlled, and which is constructed and used in a manner to minimize the introduction, generation, and retention of particles inside the room, and in which other relevant parameters e.g. temperature, humidity, and pressure, are controlled as necessary. (EN ISO 14698-1)
Closed process	A system or equipment in which the product is manipulated within a sealed environment.
Closed equipment	Note 1: See Open process
Equipment used in closed processes	
Conditions for intended use (for the equipment)	Meets all normal and reasonably anticipated operating conditions, including those of cleaning. These conditions may include limits for variables such as time, temperature and concentration.
Fit for purpose	Note 1: For EHEDG purposes, this expression applies concerning equipment and parts or other elements e.g. of a building, and not in the context of product and consumer. Note 2: Fit for purpose is the term preferred by GFSI

Contamination	The introduction or occurrence of any biological or chemical agent, foreign matter or other substance not intentionally added to food, which may compromise food safety, quality or suitability.
Biocontamination	
Contaminant	Note 1: Cross-Contamination is the transfer of contaminants from one part of the machine or process to another. Note 2: See Decontamination, Soil
Cross-Contamination	
Control measure	Any action and activity that can be used to prevent or eliminate a food safety hazard or reduce it to an acceptable level. (Codex) Note 1: Control measures are established after the implementation of good hygienic practices (GHP) to control hazards that were not sufficiently prevented, eliminated or reduced by the GHP. Note 2: See HACCP (Hazard Analysis Critical Control Point), Risk, Risk assessment
Controlled environment	A defined area where environmental conditions are monitored and maintained. Note 1: See Zoning
COP (cleaning-out-of-place)	Cleaning of a component in a dismantled condition when the component has been removed from a system. Subsequent manual cleaning by treating surfaces with chemical solutions, cleaning fluids and rinsing water. It can be executed in remote baths by manual operations or machines with automated cleaning steps, such as circulating chemical solutions and water rinses in a wash tank, which may be fitted with a circulating pump(s). Note 1: See Wet cleaning, CIP (cleaning-in-place), Manual cleaning, Dry cleaning

Corrective action	Actions implemented to eliminate the cause of a detected nonconformity or other undesirable situation. (ISO 22000)
Correction	<p>Note 1: Corrective actions concerns processes. The purpose of corrective action is to re-establish compliance with the critical limit and thus ensure that the control measure recovers the expected effect. In particular, for drift on a CCP, analysis needs to be run to determine the root cause(s) that led to overrun on the critical limits. (NF V01-006)</p> <p>Note 2: Corrections concern products (NF V01-006). A correction may be, for example, reprocessing, further processing, and/or elimination of the adverse consequences of the nonconformity (such as disposal for other use or specific labelling). (ISO 22000)</p>
Crevice	Any narrow cavity that can harbour or shelter soil, resulting from the improper hygienic design or from the damage of material, such as cracking, corrosion or wear that adversely affects cleanability.
Crack	
Fissure	
Dead leg	An area or space wherein a product, ingredient, cleaning or disinfection agent, or other extraneous matter may be trapped, retained, or not completely displaced during operational or cleaning procedures.
Dead end	
Dead area	
Dead space	
Dead volume	
Static Dead-Zone	
Diaphragm	<p>A thin sheet of material forming a non-porous partition between the product and a measuring sensor or an actuator.</p> <p>Note 1: See Barrier</p>

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.
Disinfectant	(Codex)
Decontamination	<p>Note 1: The destruction of microorganisms, but not usually bacterial spores (BSI 5283). Disinfection reduces microorganism population to a level acceptable for a defined purpose e.g. a level that is not harmful to health nor to the quality of food.</p> <p>Note 2: These terms also apply for equipment surfaces (internal and external)</p> <p>Note 3: Specifically in the USA, the term sanitization is more commonly used in the food industry (see Sanitation)</p> <p>Note 4: See Contamination, Cleaning, Soil</p>
Drainable	<p>Ability to drain only by operator intervention (e.g. opening, tipping, lifting) of the equipment or pipeline.</p> <p>Note 1: See Self-draining</p>
Dry cleaning	<p>Cleaning, which does not involve any use of water.</p> <p>Note 1: Dry cleaning is used in equipment and in the environment to prevent or reduce the build-up of objectionable materials such as residues of the aged or modified product.</p> <p>Note 2: Dry cleaning is mostly done manually using brushes and/or vacuum cleaners.</p> <p>Note 3: Dry cleaning of external surfaces shall not be done with pressurized air.</p>
Dry materials	Powdery materials, powdered substances low in moisture, free-flowing dry particles
Dry particulates	<p>Note 1: For food processing, this may include spray-dried and fluid bed dried products which can have an agglomerated or semi-agglomerated particle structure.</p>
Particulate Product	



Dry production	<p>All operations involved in the preparation of dry food product, proceeding in the absence of water, from receipt of dry materials, through processing and packaging, to its completion as a finished dry product.</p> <p>Note 1: This definition does not apply to the liquid area of a mixed production process such as spray drying.</p> <p>Note 2: The liquid processing hygienic design criteria apply if the dry production equipment and the area are cleaned wet.</p>
Dynamic seal	<p>The seal established between components that move relative to each other. The seal is formed using a combination of compression, pressure, and the geometrical shapes of the joined materials to create a seal at the interface of the components.</p>
Easily accessible	<p>A location that can be safely reached by personnel from the floor, another permanent work area, or stable platform (permanent or moveable).</p> <p>Note1: This term applies to where and how an item or appurtenance of an item is mounted on a larger piece of equipment or within a process. For example, a small item such as a sensor which can be held in one's hand or on a table for evaluation or inspection is accessible. However, the mounting of the sensor 10 meters above the floor in a pipeline may not be easily accessible.</p> <p>Note 2: For EHEDG purposes the preferred adjective is "easily". It is recommended that "readily" not be used.</p>
Easy accessibility	
Readily accessible	
Easily cleanable	<p>Designed and constructed to be efficiently cleaned.</p> <p>Note 1: For EHEDG purposes the preferred adjective is "easily". It is recommended that "readily" not be used.</p>
Easy cleanability	
Readily cleanable	



Easily removable	Quickly separated from the equipment with the use of simple hand tools if necessary. The latter are implements normally used by fitters, operating and cleaning personnel such as a screwdriver, a wrench or hammer. (3-A)
Easily dismountable/demountable	Note 1: For EHEDG purposes the preferred adjective is “easily”. It is recommended that “readily” not be used
Readily removable	
Readily dismountable/demountable	
Auxiliary Equipment	Machinery or components that are associated with or attached to (unitized) a primary piece of equipment to provide necessary functions. Note1: For EHEDG purposes (Certification) it applies to open equipment, wet cleaned without dismantling. Note 2: See Equipment used in open processes (open equipment), Closed equipment
Food hygiene	All conditions and measures necessary to ensure the safety and suitability of food at all stages of the food chain. (Codex)
Hygiene	
Food	Any product, ingredient or material intended to be orally consumed by human or animal.
Food product	Note 1: The definition means food according to Article 2 of Regulation (EC) No. 178/2002 and feed
Product	



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 suitability	Assurance that food is acceptable for human consumption according to its intended use. (Codex) Note 1: Suitability is now preferred to 'wholesomeness'.
GHP (Good hygiene practices)	Measures applicable throughout the food chain (including primary production through to the final consumer), to achieve the goal of ensuring that food is safe and suitable for human consumption. Note 1: GHP are prerequisite programs as defined in ISO 22000 (see oPRP (operational prerequisite program)). Note 2: Application of GHP is a prerequisite before any HACCP study. (see HACCP (Hazard Analysis Critical Control Point))
GMP (Good manufacturing practices)	All procedures, processes, practices and activities aimed at ensuring that the suitability and safety objectives are met consistently. Note 1: GMP do apply throughout the food chain. Note 2: GMP are prerequisite programs as defined in ISO 22000 (see oPRP (operational prerequisite program)). Note 3: GMP Programs are cited in FDA 21CFR117
HACCP (Hazard Analysis Critical Control Point)	A system which identifies evaluates and controls hazards that are significant for food safety. (Codex) Note 1: A HACCP study must be performed during the development of new products and processes, covering new equipment, and when changes are made on existing lines or to products.
Hazard	A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect. (Codex)



Hazard analysis	<p>The process of collecting and evaluating information on hazards and conditions leading to their presence to decide which are significant for food safety and therefore should be addressed in the HACCP plan. (Codex)</p> <p>Note 1: Hazard analysis is a crucial step in the implementation of a HACCP plan.</p> <p>Note 2: Hazard analysis must not be confused with risk analysis.</p> <p>Note 3: See Risk, Risk analysis</p>
High hygiene (area)	<p>An area within the plant where products and ingredients are vulnerable to contamination and/or microbial growth are processed, treated, handled or stored.</p> <p>Note 1: High hygiene area is equivalent to a cleanroom in the context of the food industry.</p> <p>Note 2: See Zoning, Hygiene, Risk</p>
High care (area)	
High risk (area)	
Hollow body	<p>Sealed void spaces, inaccessible to cleaning, which may become sources of contamination.</p>
Hygienic design and engineering	<p>Design and engineering (materials and fabrication) of equipment and premises which are easily cleanable assuring the food is safe and suitable for human consumption.</p> <p>Note 1: See Cleaning, Disinfection, Food hygiene</p>
Hygienic design	
Hygienic equipment class I	<p>Equipment that can be cleaned in-place and can be freed from relevant microorganisms without dismantling.</p> <p>Note 1: Used for EHEDG Certification</p>
Hygienic equipment class II	<p>Equipment that is easily cleanable after dismantling and can be freed from relevant microorganisms after reassembly.</p> <p>Note 1: Used for EHEDG Certification</p>
Hygienic Integration	<p>The process of combining or arranging two or more pieces of equipment or components to work together hygienically.</p> <p>Note 1: See Closed process, Open process, Zoning</p>



Inspection	Designed, fabricated and installed to make product contact surfaces available for close visual observation. (3A)
Low (Basic) hygiene (area)	Low (basic) relative to others but where minimal GHP may be applied.
Low (Basic) care (area)	Note 1: An area where products are not susceptible to contamination and are protected in their final packages. Can also be an area where raw materials are handled before being subjected e.g. to a microbiocidal treatment.
Low (Basic) risk (area)	Note 2: See High hygiene (area), Medium hygiene (area), Zoning
Manual cleaning	Removal of soil when the equipment is partially or totally disassembled. Note 1: Soil removal is effected with chemical solutions and water rinses with the assistance of one or a combination of brushes, non-metallic scouring pads and scrapers, and low-pressure hoses, with cleaning aids manipulated by hand. Note 2: See Cleaning, Soil, CIP (cleaning-in-place), Mechanical cleaning
Mechanical cleaning	Cleaning solely by circulating and/or flowing chemical detergent solutions and water rinses onto and over the surfaces to be cleaned, by mechanical means.
WIP (washing in place)	Note 1: For EHEDG purposes, the preferred term is “mechanical cleaning”. Note 2: See Cleaning, Soil, CIP (cleaning-in-place), Manual cleaning
Mechanical ventilation	Mechanical HVAC systems for supplying, conditioning, moving or removing air. Note 1: See High hygiene (area), Medium hygiene (area), Low (Basic) hygiene (area), Zoning

Medium hygiene (area)	A process area for products, susceptible to contamination but where the consumer group is not especially sensitive and where also no further growth is possible in the product in the supply chain.
Medium care (area)	
Medium risk (area)	Note 1: Can also be the intermediate area leading into the high hygiene zone but where access is only across certain barriers. Note 2: See High hygiene (area), Low (Basic) hygiene (area), Zoning
Membrane	An engineered porous material that is permeable to a liquid, gas, or air. Note 1: For example a reverse osmosis membrane for water treatment. Note 2: See Diaphragm, Barrier
Microbial impermeability	The ability of material or equipment to prevent the ingress of microorganisms from the outside (environment) to the inside (product area).
Microbial tightness	Note 1: See Aseptic equipment, Aseptic process
Microorganism	Living organisms that can be seen only with the aid of a microscope. Note 1: Microorganisms include bacteria, archaea, viruses, and certain protozoa, algae and fungi. Note 2: most microorganisms are unicellular.
Monitoring	Conducting a planned sequence of observations or measurements to assess whether control measures are operating as intended. (ISO 22000) Note 1: See Closed process, Open process, Aseptic process, Validation
Non-absorbent materials	Materials which, under the intended conditions of use, do not internally retain substances with which they come into contact.



Non-product contact surfaces	Exposed surfaces from which splashed product, condensate, liquids, or other materials cannot drain, drop, diffuse or be drawn into or onto the product, product contact surfaces, open packages, or the product contact surfaces of package components.
Non-food product area	Note 1: See Product contact surfaces (direct or indirect)
Non-food area	
Non-toxic materials	Materials that, under the conditions of intended use, do not release any substance in amounts that would be harmful to the consumer.
Open process	A system or equipment in which the product is manipulated and the product and product contact surfaces are exposed to the process environment.
Open surface	Note 1: See Closed process, Product contact surfaces (direct or indirect), Zoning
Open surface area	
Equipment used in open processes (open equipment)	
oPRP (operational prerequisite program)	PRP identified by the hazard analysis as essential in order to control the likelihood of introducing food safety hazards to and/or the contamination or proliferation of food safety hazards in the product(s) or in the processing environment. (ISO 22000) Note 1: For EHEDG purposes, the operational prerequisite programs are of primary significance.
Pasteurization	A microbiocidal heat treatment aimed at reducing the number of any harmful microorganisms, if present, to a level at which they do not constitute a significant health hazard. (Codex)
Pasteurizability	Note 1: In the present context, harmful is synonymous to pathogenic (see pathogenic microorganism). Note 2: For EHEDG purposes, pasteurization applies to equipment as well as to food. Note 3: See Sterilization, Food hygiene, Contamination

Pathogenic microorganisms	Microorganisms that can cause adverse health effects, illness or disease. Note 1: See Microorganism
Pathogenic bacteria	
Potable water	Water intended for human consumption according to the specifications of the World Health Organization. Note 1: Potable water must comply with national legislation.
Process line	An arrangement of units, modules and/or parts that can produce a completed or intermediate food product. Note 1: See Closed process, Open process
Product contact surfaces (direct or indirect)	All surfaces that intentionally (direct) or unintentionally (indirect) come into contact with the product, or from which product, condensate or soil may drain, drop or be drawn back into the main product, packaging material or product container, including surfaces (e.g. unsterilized packaging) that may indirectly cross-contaminate product contact surfaces or containers. A risk analysis can help to define areas of cross-contamination (e.g. all exposed surfaces of an open processing factory). Note 1: See Non-product contact surfaces
Product contact area	
Qualification	A formal process of meeting specified requirements for equipment and utilities. Note 1: See Validation
R _a	An arithmetical mean of the absolute values of the surface profile departure within a sampling length. Note 1: See Surface treatment
Relevant microorganisms	Microorganisms, able to contaminate, multiply or survive in the food product and be harmful to the consumer or product quality.
Revalidation	Repeated validation of an approved process (or a part thereof) when changed or modified to ensure continued compliance with established requirements. Note 1: See Validation

Rinsing	<p>Removal of product, dirt, chemicals, cleaning residues or any objectionable matter by flowing potable water.</p> <p>Note 1: Rinsing is done prior to cleaning, between cleaning and disinfection, after disinfection, and additionally can be done before a production run.</p> <p>Note 2: See Cleaning</p>
Risk	<p>A function of the probability of an adverse health effect and the severity of that effect, consequential to a hazard(s) in food. (Codex)</p>
Hygiene Risk	<p>Note 1: In Codex terminology 'risk' relates to food safety and not to quality-related matters. It is expressed as the probability or frequency of an adverse health effect caused by a specified hazard e.g. "the risk of disease D in Country X is n for 100 000 people per year".</p> <p>Note 2: For EHEDG purposes, 'risk' is synonymous to probability or likelihood and can include risks to quality.</p> <p>Note 3: See Risk analysis, Risk assessment, Contamination, HACCP (Hazard Analysis Critical Control Point)</p>
Risk analysis	<p>A process consisting of three components: risk assessment, risk management and risk communication. (Codex)</p> <p>Note 1: Whereas hazard analysis is under the responsibility of food manufacturers, risk analysis is a public health matter.</p> <p>Note 2: See Hazard analysis, Risk assessment, Risk communication</p>

Risk assessment

A scientifically based process consisting of the following steps: (i) hazard identification, (ii) hazard characterization, (iii) exposure assessment, and (iv) risk characterization. (Codex)

Note 1: Risk assessment is the scientific part of the risk analysis process in which the hazards and risk factors are identified and the risk is calculated.

Apart from an endpoint calculation of risk, the risk model developed can be of value in determining the parts of the chain which contribute most to risk or to investigate the effect of changes in practices or processes throughout the chain on the risk level.

Hazard characterization relates exposure to the hazard with a public health effect (illness, death) frequently by assessing the dose-response relationship;

Exposure assessment estimates the intake/exposure of the hazard by/of the consumer; risk characterization calculates the risk from the exposure (intake) and dose-response estimate (effect).

Note 2: Hazard identification identifies particular hazards in a product or process.

Note 3: See Hazard analysis, Risk analysis, Risk communication

Risk communication

The interactive exchange of information and opinions throughout the risk analysis process concerning risk, risk-related factors and risk perceptions, among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions. (Codex)

Note 1: Risk communication involves transparent communication between the risk assessors (scientists) and the risk managers (national or international governmental organizations).

Note 2: The results of risk assessment and risk management should be communicated widely to the relevant stakeholders, including consumers.



Risk management	<p>The process, distinct from risk assessment, of weighing policy alternatives, in consultation with all interested parties, considering risk assessment and other factors relevant for the health protection of consumers and for the promotion of fair trade practices, and, if needed, selecting appropriate prevention and control options. (Codex)</p> <p>Note 1: Risk managers are governmental, national or international, organizations (Codex).</p> <p>Note 2: Risk management is a political evaluation of the acceptability of the risks and the enforcement of measures to reduce these risks if necessary.</p>
Risk zone	Note 1: See Zoning
Sanitizing	<p>A process applied to a cleaned surface capable of reducing the numbers of the most resistant human pathogens by at least 5 log₁₀ reductions (99.999%) to 7 log₁₀ reductions (99.99999%) by applying accumulated hot water, hot air, or steam, or by applying an EPA-registered sanitizer (USA) according to label directions. Sanitizing may be effected by mechanical or manual methods using hot water, steam, or an approved sanitizer.</p> <p>Note 1: The conditions in which the processes are applied seldom enable to achieve the number of reductions obtained in laboratory tests.</p> <p>Note 2: For EHEDG purposes, the word “disinfection” is preferred.</p> <p>Note 3: See Cleaning, Disinfection, Sterilization, Pasteurization</p>
Sanitization	
Sanitizer (USA)	
Seal	<p>Closure of an opening to effectively prevent the entry or passage of unwanted matter.</p> <p>Note 1: For EHEDG purposes, seals are fabricated from elastomeric materials.</p> <p>Note 2: See Barrier, Dynamic seal</p>
Sealing	
Static seal	
Self-draining	<p>Combination of design, construction, installation and surface finish preventing the retention of liquid except for normal surface wetting.</p> <p>Note 1: See Drainable</p>



Shadow areas	<p>Obstructed areas on product contact surfaces where cleaning solutions will not flow or impinge directly across or on the surface.</p> <p>Note 1: See Easy cleanability, Hygienic design, CIP (cleaning-in-place)</p>
SIP (sterilization in place)	<p>Sterilization without dismantling.</p> <p>Note 1: For EHEDG purposes, this applies only to equipment or processes, not to product.</p>
Steam sterilisability	<p>Note 2: For EHEDG purposes, aseptic certification is based on steam sterilisability.</p> <p>Note 3: See Sterilization</p>
Soil	<p>Any undesirable or objectionable material on surfaces in the equipment or process environment.</p> <p>Note 1: Soil may or may not contain microorganisms</p> <p>Note 2: See Cleaning, Contaminant</p>
Solution	<p>Water or any mixture of cleaning agents, sanitizers and water used for flushing, cleaning, rinsing, or sanitizing.</p>
Splash contact surfaces	<p>External surfaces that during normal production are subject to the accumulation of soil which does not return to the product and which require routine cleaning.</p>
Splash zone	<p>Note 1: These surfaces do not need to be fabricated from Food Contact Materials.</p>
Splash area	<p>Note 2: See Product contact surfaces (direct or indirect), Non-product contact surfaces, Open process</p>
Sterilization	<p>A process effected by chemicals, heat or other physical means, aimed at removing or killing all forms of microorganisms, including bacterial spores.</p>
Commercial sterility	<p>Note 1: In the US, “commercial sterilization” refers to the inactivation of all organisms of significance to public health and the absence of spoilage under normal conditions of storage.</p>
Commercial sterilization	<p>Note 2: Sterilization can equally apply to the treatment of food or equipment.</p> <p>Note 3: See SIP (sterilization in place), Pasteurization, Cleaning</p>

Substantially flush	<p>Mating surfaces or other juxtaposed surfaces that are not more than 0.2 mm off-set from each other, except for pipeline and tubular piping welds which must meet EHEDG Guideline Doc. 9 and 35.</p> <p>Note 1: For 3A purposes, 1/32 in. (0.794 mm) off-set from each other, except for pipeline and tubular piping welds see criteria in AWS/ANSI D18.1.</p>
Surface treatment	<p>A process whereby chemical or mechanical properties of the existing surface are altered.</p> <p>Note 1: There is no appreciable build-up of new material or removal of existing material.</p> <p>Note 2: Examples of surface treatment are polishing, shot peening, surface hardening by laser or electron beam, carburizing, nitriding, etching, oxidation, passivation, ion implantation, electropolishing.</p> <p>Note 3: See Surface finish</p>
Surface finish	<p>The roughness of a surface; for food processing acceptable surface finish is generally considered 0.8 μm (0.32 μin).</p> <p>Note 1: Other surface roughness levels may be suitable depending upon the product characteristics.</p> <p>Note 2: See Surface treatment, Hygienic design, Cleaning</p>
Validation	<p>Obtaining evidence that the control measures managed by the HACCP plan and by the operational PRPs are capable of being effective. (ISO 22000)</p> <p>Note 1: Validation is done before the application of a new process, or of a modified process (Revalidation).</p> <p>Note 2: Validation requires that performance be measured against an expected outcome. For validation of an individual control measure or a defined combination of control measures, the expected outcome frequently will be expressed in terms of a performance criterion (e.g., reduction of the level of Salmonella by 99.999% [5-log reduction]). (Codex)</p> <p>Note 3: See Revalidation, Open process, Closed process, CIP (cleaning-in-place), SIP (sterilization in place), HACCP (Hazard Analysis Critical Control Point), oPRP (operational prerequisite program), Verification</p>

Verification	<p>Confirmation, through the provision of objective evidence, that specified requirements are being fulfilled. (ISO 22000)</p> <p>Note 1: Verification is done after a process, a control measure, etc. has been implemented.</p> <p>Note 2: In the context of a food safety control system: The application of methods, procedures, tests and other evaluations, in addition to monitoring, to determine whether a control measure is or has been operating as intended outcome. (Codex)</p> <p>Note 3: See Revalidation, Open process, Closed process, CIP (cleaning-in-place), SIP (sterilization in place), HACCP (Hazard Analysis Critical Control Point), Validation</p>
Wet cleaning	<p>Cleaning (and disinfection if necessary) of equipment or processing environment with solutions followed by rinsing.</p> <p>Note 1: Wet cleaning procedure should be carried out only when the product is not exposed using methods that limit the amount of water applied and its spread.</p> <p>Note 2: Use as little water as possible and to be as dry as possible rapidly after cleaning are highly recommended practices.</p> <p>Note 3: See Cleaning, Open process, Closed process, Dry cleaning, CIP (cleaning-in-place), Manual cleaning, Mechanical cleaning</p>
Worst-case	<p>A condition or set of conditions encompassing the upper or lower processing limits for operating parameters and circumstances, within SOPs, which pose the greatest chance of product or process failure when compared to ideal conditions.</p>
Zoning	<p>The site-specific aspects of the physical or visual division of the plant or equipment into sub-areas, leading to the segregation of different activities with different hygiene levels.</p>
Hygiene Zone	<p>Note 1: Controlled environment refers to all zoning but may relate more to the high hygiene zone.</p>
Controlled environment	<p>Note 2: Zoning cannot be defined for all plants and processes in black and white as there will always be site-specific aspects that play a role. Most important is that zoning fits into the overall plan of prevention with respect requirements of process and safety of consumers.</p>