JFS-E-C Standard
(Sector: E/L)
[Requirements for Organizations]

Ver. 2.2

Japan Food Safety Management Association

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1. Introduction

1.1 JFS-C Standard

The JFS-C Standard (hereinafter referred to as “this Standard”) is a standard developed by the Japan Food Safety Management Association (JFSM) and is intended to assist organizations to establish, operate and improve its management systems for manufacturing safe food products. In addition, this Standard can also be utilized to have the system of the organization (*1) evaluated by external agencies including Certification Bodies. This Standard is utilized by organizations that endeavor to realize a food safety management system applicable worldwide.

(*1) “Organization” refers to a business entity to whom the requirements of this Standard apply. In the manufacturing sector, it refers to business operator, group or individual who manufactures food products.

1.2 Scope of Application

This Standard applies to the “food manufacturing sector (E)” and to the “manufacturing sector of chemical products (including biochemical products) (L)” as follows:

Food Manufacturing Sector (E)
EI Processing of perishable animal products;
EII Processing of perishable plant products;
EIII Processing of perishable animal and plant products (mixed products);
EIV Processing of ambient stable products.

Manufacturing Sector of Chemical Products (including biochemical products) (L)
L Production of chemical products (including biochemical products).
(Production of additives, vitamins, minerals, bio-cultures, flavorings, enzymes and processing aids).
“Chemical products (including biochemical products)” herein refer to those related to food.

1.3 Structure of this Standard

This Standard consists of three elements, namely, Food Safety Management Systems (FSM), Hazard Analysis and Critical Point Control (HACCP), and Good Manufacturing Practice (GMP).

This Standard only specifies common requirements for the manufacturing sector, and does not cover individual hygiene requirements for each product. Organizations shall use information appropriate for the organization (e.g. laws and regulations on food safety, standards specified by the relevant industry group, “General Principles of Food Hygiene Code of Practices” by the Codex Alimentarius Commission (*2), specific code of conduct), in addition to the requirements stipulated in this Standard. Furthermore, organizations are advised to refer to JFS Standards Interpretation of the Requirements and JFSM Guidelines.

(*2) Codex Alimentarius Commission
“RECOMMENDED INTERNATIONAL CODE OF PRACTICES” GENERAL PRINCIPLES OF FOOD HYGIENE” developed and provided by Codex Alimentarius Commission for specific industry as CAC/RCP series.

1.4 Exclusion from Application of Requirements

All the requirements in this Standard shall be applied in principle. However, in case any of the requirements in this Standard is not able to apply for reasons arising from the business scale, business form and so on of an organization, the organization shall provide a document which indicates proof of non-applicability with explanations demonstrating the proper maintenance of food safety management.

1.5 Continuous Improvement

Organizations are required to fulfill requirements for organizations, make continuous improvement to the organization's food safety management, and to maintain and improve the level of the food safety management. Therefore, requirements for organizations are formulated on the basis of repeating Plan-Do-Check-Act (PDCA) cycles.

Each requirement for organizations specified by the Scheme is closely linked to one another in a PDCA cycle. Additionally, a PDCA cycle exists within each requirement. Organizations are required to understand the whole image of requirements and comply each individual requirement.

Requirements for organizations in PDCA cycle are summarized in the figure on the following page:

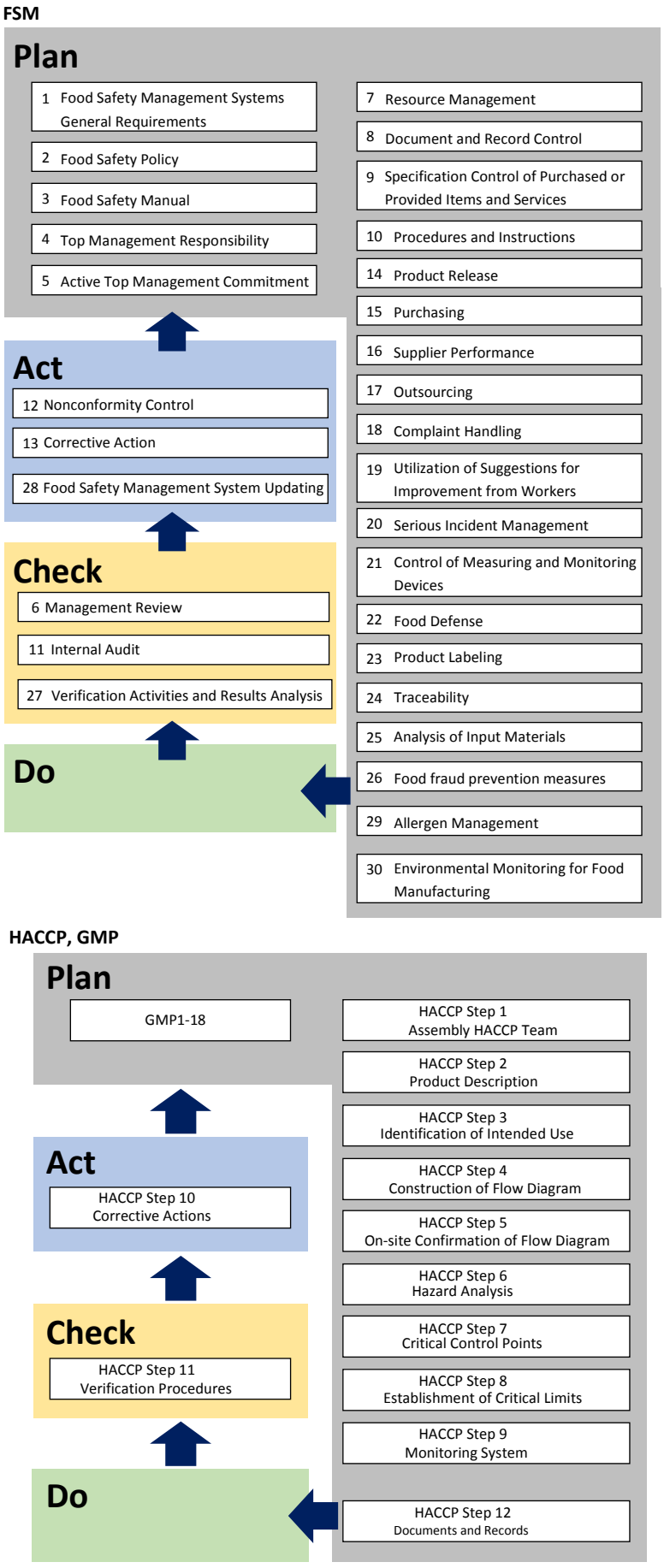

Figure: Structure of this Standard from the PDCA point of view

(Reference) Category is as shown in the table below:

Category List of JFS Standard Sectors

The categories below are used in this JFS Standard.

The “food manufacturing sector (E)” refers to EI-EIV.

The “manufacturing sector of chemical products (including biochemical products) (L)” refers to L.

Code	Category	Code	Category
AI	Farming of Animals for Meat/ Milk/ Eggs/ Honey	F	Production of feed
AII	Farming of Fish and Seafood	G	Catering
BI	Farming of Plants (other than grains and pulses)	H	Retail / Wholesale
BII	Farming of Grains and Pulses	I	Provision of Food Safety Services
C	Animal Conversion	J	Provision of Storage and Distribution Services
D	Pre-process handling of plant products, nuts and grain	K	Manufacture of Food Processing Equipment
EI	Processing of perishable animal products	L	Production of Chemical Products (including Biochemical Products) (Additives, Vitamins, Minerals, Bio-cultures, Flavorings, Enzymes and Processing aids)
EII	Processing of perishable plant products		
EIII	Processing of perishable animal and plant products (mixed products)	M	Production of Food Packaging
EIV	Processing of ambient stable products	N	Food Broker / Agent

Cited from GFSI Benchmarking Requirements

2. Specific Requirements (Standard)

2.1 Food safety management systems (FSM)

Number	Clause Name	Requirements
FSM 1	Food Safety Management Systems General Requirements	The organization shall document, implement and maintain the elements of the organization's Food Safety Management Systems. Additionally, the organization shall continuously improve the organization's Food Safety Management Systems properly adapting to changes in the surrounding social environment. The food safety management systems shall: a) clarify the scope of application of the food safety management systems, b) comply with laws and regulations related to food safety in the country of manufacture and the country of destination. c) identify the processes needed for the food safety management systems, d) determine the sequence and interaction of these processes, e) determine the criteria and methods required to ensure the effective operation and control of these processes, f) continue and maintain the operation and monitoring of these processes, ensure the availability of resources and information necessary to support the operation and monitoring of these processes, g) measure, monitor and analyze these processes and implement actions necessary to achieve planned results and continuous improvement. h) include a procedure for verification of the food safety management system to confirm that the system continues to be effective. Updating of a food safety management system shall be planned and conducted. On updating, considerations shall be given to maintain the integrity of the food safety management system.
FSM 2	Food Safety Policy	The top management shall have a clear, concise and documented food safety policy statement and objectives specifying the extent of the organization's commitment to meet the safety needs of its products. The top management shall ensure the organization to establish measurable objectives consistent with the organization's food safety policy, formulate plans to achieve the objectives, monitor the progresses against the objectives, and to update the objectives as necessary.
FSM 3	Food Safety Manual	The organization shall have a documented Food Safety Manual having a scope appropriate for the range of business activities to be covered, including documented procedures and specific references to them and describing the interaction of the related process steps.

Number	Clause Name	Requirements
FSM 4	Top Management Responsibility	The top management shall establish a clear organizational structure which unambiguously defines and documents the job functions, responsibilities, directing and reporting structure and information sharing of at least the workers whose activities affect food safety. The top management shall appoint person(s) responsible for the operation of the organization's food safety management system.
FSM 5	Top Management Commitment	The top management shall provide evidence of the commitment to establish, implement, maintain and improve the food safety management system.
FSM 6	Management Review	The top management shall review the verification of the food safety management system and HACCP Plan, at planned intervals, to ensure the continuing conformity, suitability and effectiveness. HACCP Plan shall be reviewed also in the event of any change that impacts food safety. Such a review shall evaluate the need for changes to the entire food safety management system, including the food safety policy and food safety objectives.
FSM 7	Resource Management	The top management shall determine and provide, in a timely manner, the qualified resources (including suitably qualified personnel) needed to implement, maintain and improve the food safety management system.
FSM 8	Document and Record Control	The organization shall prepare documents and keep records to demonstrate that the organization's operations and activities comply with the requirements of this Standard. The organization shall have a written procedure to control and maintain the documents and records and make the documents and records readily accessible when needed. The retention period of the documents and records shall be set complying with, if any, the regulatory and customer requirements.
FSM 9	Specification Control of Purchased or Provided Items and Services	For all inputs to the process, such as items and services (including raw materials and ingredients, utilities and services (e.g. electricity, water, transport, maintenance)) that are purchased or provided and have an effect on the safety of final product, the organization shall ensure that documented specifications are prepared, maintained, securely retained and readily accessible when needed.
FSM 10	Procedures and Instructions	The organization shall design the products and production processes taking into account all relevant safety requirements. The organization shall establish, implement and maintain documented procedures and instructions for all processes and operations having an effect on food safety.
FSM 11	Internal Audit	The organization shall plan and implement internal audits for the activities covering all the scope of the food safety management system, including HACCP Plan, Food Defense Plan and Food Fraud Prevention Plan. The results of internal audits and corrective actions shall be recorded. The organization shall specify the competence required for internal auditors and provide training.

Number	Clause Name	Requirements
FSM 12	Nonconformity Control	The organization shall establish effective procedures to ensure that any product, which does not conform to food safety requirements, is clearly identified, controlled, discarded, modified, reprocessed and/or corrected to prevent unintended use or delivery. These procedures shall be defined in a documented procedure that is securely retained and readily accessible when needed.
FSM 13	Corrective Action	The organization shall establish procedures for the determination and implementation of corrective action in the event of any nonconformities relating to food safety. In case of deviance or violation, the organization shall identify the root cause, take measures to prevent recurrence, and review the effectiveness for the series of corrective actions.
FSM 14	Product Release	The organization shall prepare and implement appropriate product release procedures.
FSM 15	Purchasing	The organization shall control purchasing processes to ensure that all externally sourced raw materials, ingredients and services (including packaging materials) which have an effect on food safety, conform to requirements. In case of emergency, such as natural disaster, purchasing from non-approved suppliers is allowed. Under such situation, in order to ensure food safety, the organization shall assess the non-approved supplier facility and verify the conformity of the products to the given specification.
FSM 16	Supplier Performance	The organization shall establish, implement and maintain procedures for the evaluation, approval and continued monitoring of suppliers, which have an effect on food safety. The results of evaluations and investigations, and follow up actions shall be recorded.
FSM 17	Outsourcing	The organization shall, where the organization chooses to outsource any process that may affect food safety, shall ensure control over such processes. Control of such outsourced processes shall be identified, documented and monitored as a part of food safety management system. In case of emergency, such as natural disaster, purchasing from non-approved service provider is allowed. Under such situation, in order to ensure food safety, the organization shall assess the non-approved service provider facility, as necessary, and verify the conformity of the products to the given specification.
FSM 18	Complaint Handling	The organization shall establish, implement and maintain an effective system for the management of complaints and complaint data to properly control and correct defects in food safety activities.
FSM 19	Utilization of Suggestions for Improvement from Workers	The organization shall establish and implement a system to properly utilize suggestions from workers to improve food safety.

Number	Clause Name	Requirements
FSM 20	Serious Incident Management	The organization shall establish, implement and maintain an effective incident management procedure. The incident management procedure shall be regularly tested for all products it supplies and cover planning for product withdrawal and product recall as required. The effectiveness of the incident management procedure shall be verified at least once a year, and the results shall be recorded.
FSM 21	Control of Measuring and Monitoring Devices	The organization shall identify the methods for measurement of parameters critical to ensure food safety, identify the measuring and monitoring devices required, and carry out calibration of these measuring and monitoring devices by a method traceable to a national, international or equivalent standard.
FSM 22	Food Defense	The organization shall establish a documented assessment procedure to identify threats of food defense and prioritize food defense measures, implement and record the result. The organization shall develop a documented plan that specifies the measures the organization implements to mitigate the identified threats of food defense. The plan (Food Defense Plan) shall cover GMP and shall be incorporated into the food safety management system.
FSM 23	Product Labeling	The organization shall ensure that all product bears or is accompanied by information to enable the safe handling, display, storage, preparation and use of the product including allergens in the food supply chain or by consumer. The finished product shall be labelled according to the applicable food regulations in the intended country of sale. Procedures to ensure the correct information on the product shall be established and implemented.
FSM 24	Traceability	The organization shall establish, implement and maintain appropriate procedures and systems to ensure: a) identification of any outsourced raw materials and ingredients (including packaging materials), products, services and outsourced processes; b) product identification that includes, as a minimum, the name and location of the producer; c) identification of batches, partially processed products, work in progress, products being reprocessed, reworks, finished products, and packaging materials throughout the production process; d) records of purchaser and delivery destination for all products supplied. The procedures and systems shall be verified at least once a year, and the results shall be recorded.
FSM 25	Analysis of Input Materials	The organization shall establish and implement a system to ensure analysis of input raw materials and ingredients (including water) that have an effect on food safety. The inspection shall be conducted in compliance with ISO 17025 or equivalent standards.

Number	Clause Name	Requirements
FSM 26	Food Fraud Prevention	The organization shall establish a documented assessment procedure to identify the food fraud vulnerability such as potential falsification of product record, mislabeling and intentional dilution of product, and to prioritize food fraud mitigation measures, implement the procedure, and record the result. The organization shall develop a documented plan that specifies the measures the organization implements to mitigate the identified threats of food fraud. The plan (Food Fraud Mitigation Plan) shall cover GMP and shall be incorporated into the food safety management system.
FSM 27	Verification Activities and Result Analysis	The organization shall verify the implementation status of FSM, GMP and HACCP, and analyze the results of verification activities. Results of analysis and follow up activities shall be recorded. These results shall be reported to the top management at the management review.
FSM 28	Food Safety Management System Updating	The top management shall ensure continuous update of the organization's food safety management system. In order to achieve the continuous update, the organization shall review the organization's food safety management system at planned intervals, and record the result. The organization shall report the system updating activities to the top management at the management review.
FSM 29	Allergen Management	The organization shall develop and implement an allergen management plan for all food manufacturing facilities. The plan shall include a risk assessment of allergen cross-contamination and implemented control measures to reduce or eliminate the risk of cross-contamination. All finished products intentionally or potentially containing allergenic materials shall be labelled according to the allergen labelling regulations in the country of manufacture and the country of destination.
FSM 30	Environmental Monitoring for Food Manufacturing	The organization shall develop and implement a risk-based environmental monitoring program which includes all high-care and high-risk areas.

2.2 Hazard Analysis and Critical Control Point (HACCP)

	Clause Name	Requirements
HACCP Step 1	HACCP Team Assembly	A HACCP team shall be assembled with competent staff.
HACCP Step 2	Product Description	Product specifications shall be described in written document. The document shall describe all product information necessary to conduct hazard analysis. Scope of the HACCP system shall be defined per product/product group and per process line/process-location.
HACCP Step 3	Identification of Intended Use	The intended use of product and target consumers shall be clearly described in written document.
HACCP Step 4	Construction of Flow Diagram	The flow diagram that covers all steps in the operation shall be constructed.
HACCP Step 5	On-site Confirmation of Flow Diagram	The flow diagram shall be verified whether it correctly reflects the existing process steps of the operation.
HACCP Step 6 (Principle 1)	Hazard Analysis	The HACCP team shall list all of the hazards that are reasonably likely to occur at each process steps, conduct an analysis, and identify any necessary measures to control them. Hazard shall include allergens where required.
HHACCP Step 7 (Principle 2)	Critical Control Points	Critical Control Points (CCPs) shall be determined.
HACCP Step 8 (Principle 3)	Establishment of Critical Limits	Critical limit(s) shall be specified for each CCP.
HACCP Step 9 (Principle 4)	Monitoring System	Monitoring procedure shall be established for each CCP.
HACCP Step 10 (Principle 5)	Corrective Actions	Procedure of corrective action (correction, and investigation and removal of root cause) shall be established for deviations from critical limit.
HACCP Step 11 (Principle 6)	Verification	Verification procedures shall be established to confirm (1) whether the defined instructions (HACCP Plans) are kept and (2) whether the defined instructions are working as intended. Verification shall be carried out considering the design of equipment, change in processing method and technology development within the manufacturing process.
HACCP Step 12 (Principle 7)	Documents and Record	Necessary documents shall be prepared and maintained. Necessary records shall be taken and retained.

2.3 Good Manufacturing Practice (GMP)

Number	Clause Name	Requirements
GMP 1	Facility Environment	The site shall be located and maintained so as to prevent contamination and enable the production of safe products.
GMP 2	Site Management	An appropriate standard for all grounds in the site shall be established and kept.
GMP 3	Design, Construction and Layout of Facilities, Equipment and Production	Site, building, and facility and equipment in plant shall be laid out, designed, constructed and maintained, to enable controlling the risk of product contamination caused by external and internal environment.
GMP 4	Manufacturing and Storage Area Specifications, and Utility Management	Specifications of manufacturing and storage areas shall meet the intended purpose. Procedures to control contamination and condensation shall be established and implemented, as necessary, for utilities such as air, compressed air and other gases which may come into contact with food.
GMP 5	Devices and Tools	Devices and tools shall be suitably designed for the intended uses and shall be used, maintained and stored so as to minimize food safety risks.
GMP 6	Maintenance	A system of planned maintenance covering all items of equipment which are critical to product safety shall be established.
GMP 7	Staff Facilities	Staff facilities shall be designed and used so as to minimize food safety risks including allergen.
GMP 8	Physical, Chemical and Biological Product Contamination Risks	Appropriate facilities and procedures to control the risks of physical, chemical (including allergen) and biological contamination of product shall be established.
GMP 9	Segregation and Cross-contamination	Procedures to prevent contamination and cross-contamination shall be established for raw materials and ingredients (including packaging materials), partially processed products, work in progress, products being reprocessed, reworks, and finished products, covering all aspects of food safety including micro organisms, chemicals and allergens.
GMP 10	Stock Management	A system to use raw materials and ingredients (including packaging materials), partially processed products, work in progress, products being reprocessed, reworks, and finished products by a designated order and within the defined expiry period shall be established and stored under the proper conditions to avoid contamination and deterioration.
GMP 11	Housekeeping, Cleaning and Hygiene	Housekeeping and cleaning shall be carried out following the documented standard throughout all the process steps and stages, and an appropriate hygiene level shall be maintained at all times by disinfecting where necessary. Cleaning tools, cleaning agents and disinfectants shall be suitable for their intended use and stored appropriately.

Number	Clause Name	Requirements
GMP 12	Water and Ice Management	Application-dependent quality standards shall be established for waters (including steam and ice; the same applies hereinafter) used in food manufacturing, and the quality of water shall be regularly monitored and recorded. Facilities, tools and procedures used for handling water shall be checked to prevent contamination.
GMP 13	Waste Management	Adequate systems for segregation, collection and disposal of waste material shall be established. Locations and containers for placing waste material shall be controlled to prevent attraction of pests or growth of harmful organisms/micro organisms. The traffic line of waste material shall be established so as to prevent cross-contamination into food.
GMP 14	Pest Control	A system shall be established to control or eliminate the food safety risks caused by pests in the site or in the facilities. In case where chemicals are used, handling procedure shall be established not to affect food.
GMP 15	Transport	A documented system shall be established to ensure that containers and vehicles, including contracted vehicles, used for the transportation of raw materials and ingredients (including packaging materials), partially processed products, works in progress, products being reprocessed, reworks, and finished products (including packed fresh products in final packaging) are suitable for the intended use, maintained in good repair and clean.
GMP 16	Personnel Hygiene and Health Management	Documented personal hygiene criteria based on contamination risks due to product characteristics shall be established and implemented. The criteria shall include provision of hand washing and toilet facilities, ways and frequency of hand washing, medical screening procedure to identify conditions impacting food safety, proper protective clothing, rules on the clothing and shoes, rules on accessing production area, ways of food handling, and control measures for foreign materials. The criteria shall be made fully known, trained and applied to workers, contractors and visitors without exception.
GMP 17	Education and Training	A system shall be in place to ensure all workers are adequately educated and trained on food safety principles (including HACCP) and practices, commensurate with the worker's activity. A system to ensure all workers are adequately instructed and supervised shall be established. Education and training shall ensure all workers to be aware of the roles in food safety and the significance of the activities.

Number	Clause Name	Requirements
GMP 18	Packing and Storage of Product	Packaging materials shall be obtained with information of origin, be appropriate for use and be used and stored so as not to be a source of contamination to the product. Products shall be handled, sorted, graded and packaged in a way to minimize biological, chemical and physical contamination. Products shall be stored in designated areas and handled under proper condition to minimize contamination.

Annex

● Definitions

	Term	Definition
1.	categories	Range of application of certification.
2.	CCP (critical control point)	Step at which control can be applied and is essential or eliminate a food safety hazard or reduce it to an acceptable level. (Cited from the definition in ISO 22000:2005)
3.	competence	Ability to apply knowledge and skills to achieve intended results. Note to entry: Demonstrated competence is sometimes referred to as qualification. (Cited from the definition in ISO 9000:2015. Note 2 to entry is not included in the definition of "competence" in this document.)
4.	control	The state wherein correct procedures are being followed and criteria are being met. (Cited from the definition in CAC/RCP 1-1969, Rev. 4-2003 - Annex)
5.	correction	Action to eliminate a detected nonconformity. Note 1 to entry: A correction can be made in advance of, in conjunction with or after a corrective action. Note 2 to entry: A correction can be, for example, rework or regrade. (Cited from the definition in ISO 9000:2015)
6.	corrective action	Action to eliminate the cause of a nonconformity and to prevent recurrence. Note to entry: There can be more than one cause for a nonconformity. (Cited from the definition in ISO 9000:2015)
7.	critical limit	Criterion which separates acceptability from unacceptability. Note to entry: Critical limits are established to determine whether a CCP remains in control. If a critical limit is exceeded or violated, the products affected are deemed to be potentially unsafe. (Cited from the definition in ISO 22000:2005)
8.	document	Information and the medium on which it is contained. Example: Record, specification, procedure document, drawing, report, standard Note to entry: The medium can be paper, magnetic, electronic or optical computer disc, photographic or master sample, or combination thereof. (Cited from the definition in ISO 9000:2015. Notes 2 and 3 to entry are not included in the definition of "document" in this document.)
9.	employee, personnel	All personnel in an organization who are involved in work related to food safety, including part-timers, contractors, and dispatched workers.
10.	flow diagram	Diagrams constructed to show all the process steps for specified product.
11.	food	All substances that are processed, semi-processed or unprocessed with the intention of human consumption. Note to entry: Food includes all substances used for manufacturing, preparation and processing of beverages, chewing gums and foods. However, it does not include substances used solely for cosmetics, cigarettes and drugs.
12.	food supply chain	Sequence of the stages and operations involved in the production, processing, distribution, storage and handling of a food and its ingredients, from primary production to consumption. (Cited from the definition in ISO 22000:2005)
13.	food safety management system	A system to specify policies and objectives and to achieve these objectives so that food does not harm the consumer for when the food is cooked and/or consumed in accordance with the intended use. (Referenced to ISO 9000:2015 and ISO 22000:2005)

	Term	Definition
14.	food safety policy	Overall intentions and direction of an organization related to food safety as formally expressed by top management. (Cited from the definition in ISO 22000:2005)
15.	hazard	A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect. (Cited from the definition in the Codex General Principles of food hygiene, Codex Alimentarius Commission（CAC/RCP 1-1969, Rev. 4-2003）)
16.	intended use	Way of use or consumption of product or building/equipment designated at the time of planning and designing.
17.	management	Coordinated activities to direct and control an organization. Note to entry: Management can include establishing policies and objectives, and processes to achieve these objectives. (Cited from the definition in ISO 9000:2015. Note 2 to entry is not included in the definition of "management" in this document.)
18.	management system	Set of interrelated or interacting elements of an organization to establish policies and objectives, and processes to achieve these objectives. (Cited from the definition in ISO 9000:2015)
19.	monitoring	Conducting a planned sequence of observations or measurements to assess whether action taken to control the food safety is operating as intended. (Referenced to ISO 22000:2005)
20.	nonconformities	Non-fulfilment of a requirement. (Cited from the definition in ISO 9000:2015)
21.	packaging materials	Materials used for packaging food products, such as papers, plastics, wooden boxes, cardboards, PET bottles, and tin cans.
22.	product	Output of an organization that can be produced without any transaction taking place between the organization and the customer. Note 1 to entry: Production of a product is achieved without any transaction necessarily taking place between provider and customer, but can often involve this service element upon its delivery to the customer. Note 2 to entry: The dominant element of product is that it is generally tangible. Note 3 to entry: Hardware is tangible and its amount is a countable characteristic (e.g. tyres). Processed materials are tangible and their amount is a continuous characteristic (e.g. fuel and soft drinks). Hardware and processed materials are often referred to as goods. Software consists of information regardless of delivery medium (e.g. computer programme, mobile phone app, instruction manual dictionary content, musical composition copyright, driver's license). (Cited from the definition in ISO 9000:2015)
23.	raw materials and ingredients	Ingredients refer to those used as part of product and do not retain the original form when the product is finished. Examples are sugar, powdered milk, additives, and spices. Materials is a general term referring to packaging materials, processing aids, cleaning/cleansing agents, lubricants, etc.
24.	recall	Cessation of supply of product and recovering of all the products including those kept by consumers, retail stores, and stocks under distribution.
25.	record	Document stating results achieved or providing evidence of activities performed. Note 1 to entry: Records can be used, for example, to formalize traceability and to provide evidence of verification, preventive action and corrective action. Note 2 to entry: Generally records need not be under revision control. (Cited from the definition in ISO 9000:2015)

	Term	Definition
26.	review	Determination of the suitability, adequacy or effectiveness of an object to achieve established objectives EXAMPLE: Management review, design and development review, review of customer requirements, review of corrective action and peer review. Note to entry: Review can also include the determination of efficiency. (Cited from the definition in ISO 9000:2015)
27.	serious incident	Food incident that may have an effect on food safety. Does not include incidents that do not have an effect on food safety but may have an effect on the quality.
28.	supplier, customer	Business operators from whom materials and ingredients, utilities, services, etc., are provided, and business operators to whom manufactured food is sold.
29.	top management	Person or group of people who directs and controls an organization at the highest level Note 1 to entry: Top management has the power to delegate authority and provide resources within the organization. Note 2 to entry: If the scope of the management system covers only part of an organization, then top management refers to those who direct and control that part of the organization. (Cited from the definition in ISO 9000:2015. Note 3 to entry is not included in the definition of "top management" in this document.)
30.	updating	Immediate and/or planned activity to ensure application of the most recent information. (Cited from the definition in ISO 22000:2005)
31.	verification	Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled. Note 1 to entry: The objective evidence needed for a verification can be the result of an inspection or of other forms of determination such as performing alternative calculations or reviewing documents. Note 2 to entry: The activities carried out for verification are sometimes called a qualification process. Note 3 to entry: The word "verified" is used to designate the corresponding status. (Cited from the definition in ISO 9000:2015)