



FOOD CODE 2020

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1. Preliminary Provisions

1.1 Introduction

Foodborne illness can be very serious and even life-threatening to some consumers, especially children, pregnant women, elderly, and those with impaired immune systems or allergies. Effective control of foodborne illness is vital, not only to avoid adverse effects on human health, but also to safeguard the food industry. The potential business repercussions of foodborne illness are many, including loss of earnings; unemployment and litigation; damage to trade and tourism through negative publicity; lower staff morale; and professional embarrassment. The challenge is to continually reduce the risks and achieve excellence in food safety, while supporting the ability of the food industry to adapt to new technology and survive in a competitive environment.

1.2 Purpose

The purpose of this Code is to provide a set of model requirements to help food establishments achieve a higher degree of compliance with the food regulations and attain a higher standard of food safety through adoption of good practices. It also provides law enforcement officers of the Food safety Department and persons engaged in food business a common set of comprehensive advice and guidance on the application of the relevant regulations and recommended ways for compliance, with a view to improving consistency in the interpretation and application of the food regulations by all stakeholders.

The ultimate objective of the Code is to provide high level of protection to human life and health and to protect the interests of the consumers by safeguarding them from fraudulent or deceptive practices, adulteration and any other practices that may cause illness or injury to the consumer.

1.3 Application

The Code is an interpretative guideline that explains how to meet the objectives identified in the Administrative and Local Orders passed by the Government of Dubai. It is not intended to be used as a rigid and inflexible document.

- a. The term “**shall**” or “**must**” is used throughout this document to indicate those provisions which the food establishments have to comply with and are an absolute requirement.
- b. The term “**should**” is used to indicate those provisions which the food establishments have to comply with. However, deviations from such provisions are allowed under exceptional circumstances when there is a valid reason to ignore or to seek alternative measures without compromising the food safety objective.

The term “**shall not**” is used to indicate that the provisions that are absolutely prohibited.

The term “**should not**” is used to indicate those provisions that are prohibited. However, deviations from such provisions are allowed under exceptional circumstances when there is a

valid reason to ignore or to seek alternative measures without compromising the food safety objective.

- c. This document provides an extensive information base to assist in the safe operation of food establishments. As new technology becomes available, operational procedures and equipment standards in a food establishment may vary from that described in this Code.
- d. Unless specifically mentioned elsewhere in this document, the provisions of this requirement apply to food products –
 - i. Manufactured, sold or prepared for sale in the Emirate of Dubai;
 - ii. Imported directly or brought into the Dubai from other Emirates;
 - iii. Exported to other countries.

Note: Processes, materials and methods other than those specified in the Code may be used by food business operators, if the operators can provide sound, scientific evidence to the Food safety Department that clearly demonstrate that those processes, materials and methods comply with the regulatory objectives.

1.4 Scope

The requirements apply to every food establishment which imports, sells, offers for sale or distributes free of charge, packages, prepares, displays, serves, manufactures, processes, or distributes food In all areas of Dubai emirate including private development zones and free zones The Code has, as its primary focus, a broad range of food establishments that include, but are not limited to, the following:

- i. restaurants, hotels, cafeterias and cafés;
- ii. food service operations in institutions, including hospitals and schools;
- iii. bakeries;
- iv. butcheries;
- v. grocery store, supermarkets and departmental stores;
- vi. food catering establishments, suppliers to cruise ships, events (desert camps), canteens;
- vii. food factories, trading companies and warehouses;
- viii. kiosks, temporary or permanent food events, and mobile vending operations;
- ix. Drinking water in rental buildings, commercial establishments, educational facilities, public places and mosques in the Emirate.

1.5 Guiding Principles

The primary objective of the Code is to ensure the safety of foods. In addition, there are a number of other expected outcomes:

- a. better knowledge of safe food handling practices by all stakeholders;

- b. improved consistency in the interpretation and application of food industry regulations by all stakeholders;
- c. establishment of minimum health and food safety practices;
- d. better communication among all sectors of the industry and government concerning critical requirements in food safety, and a greater commitment to finding cooperative approaches to reducing risks; and
- e. Improved information concerning best practices to compliment industry-driven inspection, auditing and educational programs.
- f. enhancing the concept of shared responsibility and self-commitment

1.6 Definitions

Accreditation: Third-party attestation related to a conformity assessment body (such as certification body) conveying formal demonstration of its competence to carry out specific conformity assessment tasks (such as audits & certifications). For this scheme, Emirates International Accreditation Centre (EIAC) is responsible to provide accreditation service to certification bodies.

Accredited Qualification: A qualification or certification provided by Certification bodies, which are accredited by Emirates International Accreditation Centre.

Audit criteria: Set of policies, procedures or requirements used as a reference against which audit evidence is compared.

Audit evidence: Records, statements of fact or other information which are relevant to the audit criteria and verifiable.

Audit plan: Description of the activities and arrangements for an audit.

Audit scope: Extent and boundaries of an audit.

Audit team: one or more auditors conducting an audit, supported if needed by technical experts.

Audit: A systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.

Auditor: A person with necessary competency in food safety approved by Dubai Municipality to conduct an audit.

Authorized Officer: An authorized person from the Food safety Department who can conduct inspections or investigations in food establishment.

Batch: A group or set of identifiable products obtained from a given process under practically identical circumstances and produced in a given place within one defined production period;

Blackout days: Days when the audit or any audit activities cannot be performed and should be agreed in advance between the CB and the certified organization.

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.

Certification Body: A body, approved by Dubai Municipality and accredited by the Emirates International Accreditation Centre to certify the PIC trainers and PICs.

Certification: A procedure by which a certification body, following its own independent assessment determines whether a business complies with the requirements of a recognized standard. For this scheme, the certification body shall be accredited by the Emirates International Accreditation Centre (EIAC).

Cleaning: The process of removing soil, food residues, dirt, grease and other objectionable matter.

Codex: Codex Alimentarius Commission (CAC), a United Nations Organization that supports FAO and WHO by developing food standards, guidelines and Codes of practice.

Competence: Ability to apply knowledge and skills to achieve intended results.

Compliance: Meeting all the requirements of a recognized standard.

Compliance with microbiological criteria: Obtaining satisfactory or acceptable results set in Annex 2 when testing against the values set for the criteria through the taking of samples, the conduct of analyses and the implementation of corrective action, in accordance with food law and the instructions given by the competent authority.

Concerned Department: Departments of Dubai Municipality authorized to ensure compliance with relevant regulations.

Conformity: All actions in relation to guidelines, standards or legislation which are carried out according to established procedures.

Contamination: The introduction or occurrence of a contaminant in food or the food environment.

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.

Control Point: A point or step in a food process where a control measure can be applied e.g. temperature measurement of a refrigerated storage unit. Any distinct procedure or step in receiving, storing, handling, preparing, displaying or dispensing a food.

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 at which control can be applied & is essential to prevent a food safety hazard or reduce it to an acceptable level.

Critical Limit: A maximum or minimum limit (i.e. value) at a CCP, which can be monitored & separates acceptable from unacceptable.

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

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.

Equivalent: In respect to different systems, capable of meeting the same objectives.

Examination: An examination in food safety approved by the Food Safety Department leading to an Accredited Qualification in accordance with the provisions of these Regulations.

Flow Diagram: A graphical diagram detailing the sequence of operations involved with a food product or process, usually from receipt of raw materials to the final consumer. In HACCP, these charts can help to identify the CCPs.

Food Establishment Any place where food is manufactured, prepared, traded or sold directly or indirectly to the consumer. The term includes any such place regardless of whether consumption is on or off the establishment. The term includes but is not limited to trading companies, manufacturing companies, hotels, restaurants, cafés, cafeterias, caterers in hospitals, private clubs, caterers or cafeterias in public and private educational bodies, groceries, supermarkets, meat and fish shops, bakeries, mobile vendors, temporary kitchens and snack houses in petrol stations. Unless specified otherwise, the term refers to premises located in the Emirate of Dubai.

Food establishment Operators: The person who is actively engaged in running the food establishment and is responsible for ensuring that the legal requirements are met.

Food Handler: Any person handling food directly or indirectly in a food establishment, whether packaged or unpackaged food, food equipment and utensils or food contact surfaces.

Food Hygiene: All conditions and measures necessary to control hazards and ensure the safety and suitability of food at all stages of the food chain.

Food Safety Course means a course approved by the Department in accordance with the provisions of this Code.

Food safety criterion: A criterion defining the acceptability of a product or a batch of foodstuff applicable to products placed on the market;

Food Safety Department or Department: The Food Safety Department of Dubai Municipality.

Food Safety Program: A food safety management system based on the principles of HACCP.

Food Service establishment: Food establishment such as restaurants, cafeteria, central production units, coffee shops, supermarkets, etc. that sell foods directly to the consumers for immediate consumption either on-site or off-site. The definition excludes business activities such as manufacturing, processing, trading, grocery stores etc.

Food Transportation Vehicle: Any mode of transport, designated for food, whether self-propelled or not and whether used on land, sea or in the air.

Food: Any substance or product intended to be or reasonably expected to be ingested by people. This includes beverages and drinks (except alcohol), chewing gum and any substance including water.

Good Hygiene Practices: All practices regarding the conditions and measures necessary to ensure the safety and suitability of food at all stages of the food chain.

Good Manufacturing Practice (GMP): The minimum quality & safety requirements aimed at ensuring that foods are prepared in a consistent manner according to agreed specifications e.g. raw & cooked food products are stored in separate refrigerators.

HACCP (Hazard Analysis and Critical Control Point): A preventive system of food safety management that identifies, evaluates, and controls hazards, which are significant to food safety, based on product design, hazard analysis and process control.

HACCP plan: A document prepared in accordance with the principles of HACCP to ensure control of hazards that are significant for food safety in the segment of the food chain under consideration.

Hazard analysis: 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.

Hazard: A biological, chemical or physical agent in food with the potential to cause an adverse health effect.

High-Risk Foods: High-risk foods are foods which will support the growth of food poisoning bacteria or the formation of toxins AND which are ready to eat.

Foods such as:

- ready to eat foods such as sandwiches, pizzas, hot meals;
- cooked products containing meat, fish, cheese etc.;
- cooked products that are reheated and served – pies, ready made meals, etc.;
- smoked or cured meats and fish;
- raw ready to eat foods -e.g. Oysters, Kebneyah, Sushi; cut fruits

- dairy based desserts;
- ripened soft or moulded cheese – e.g. Brie, Danish Blue, etc.;
- prepared vegetable salads including those containing fruit;
- foods labelled/described as needing to be kept at a specific temperature;
- Frozen food such as ice cream.

Licensing Authority: The government organization that provides trade license and business activity authorizations required to operate a business establishment in Dubai, both food and non-food. List of licensing agencies include but are not limited to: Dubai Economy (DED), DIFC, Dubai South, DAFZA, JAFZA, Dubai Creative & Cluster Authority etc.

Microbiological criterion: A criterion defining the acceptability of a product, a batch of foodstuffs or a process, based on the absence, presence or number of micro-organisms, and/or on the quantity of their toxins/ metabolites, per unit(s) of mass, volume, area or batch.

Micro-organisms: Bacteria, viruses, yeasts, moulds, algae, parasitic protozoa, microscopic parasitic helminths, and their toxins and metabolites.

Monitoring: The systematic observation, measurement & recording of the significant factors for control of a hazard at CCPs & assessing whether a CCP is under control.

Non-Conforming Product/Non-Conformity: A product or procedure that does not meet the required standard or specification.

Packaging: Any operation consisting of placing the food in containers (i.e. primary packaging) or placing the food containers in further packaging material (i.e. secondary packaging).

Person in Charge Certified in Food Safety: A person who has successfully achieved a certification from accredited certification body to the type of food business. He/she is directly responsible for the food related operations in the food establishment and has direct authority, control or supervision over employees who engage in the storage, preparation, display, or service of foods.

Pests: Any undesirable animal or insects including, but not limited to, birds, rodents, flies, larvae etc. that could affect the food safety of the food chain and are objectionable or a nuisance.

Potable Water: Drinking water that is pure and healthy at the point of usage and meets the requirements of approved Standards.

Prerequisites: Practices & procedures required prior to & during the implementation & ongoing operation of a HACCP system e.g. premises, equipment, staff training, pest control, waste management.

Primary Product: a product consisting of a natural raw material including goods that are available from cultivating raw materials without a manufacturing process. Significant primary product industries include agriculture, fishing, mining, and forestry.

Processing: Action(s) that substantially alters the initial product, including heating, smoking, curing, maturing, drying, marinating, extraction, extrusion or a combination of those processes.

Process hygiene criterion: A criterion indicating the acceptable functioning of the production process. Such a criterion is not applicable to products placed on the market. It sets an indicative contamination value above which corrective actions are required in order to maintain the hygiene of the process in compliance with food law.

Raw Food: Food that is neither cooked nor heat processed.

Raw foods of Animal Origin: Raw foods of animal origin such as meat, poultry products, fish, shellfish etc. that are likely to be contaminated with pathogenic or spoilage microorganisms. They are usually stored chilled or frozen to minimize spoilage.

Ready-to-Eat Foods: Any food for consumption without further treatment or processing. Examples of ready-to-eat food items may include: sliced cooked meats, cooked meat products and preparations, cooked/roast chickens, sandwiches and filled rolls, dairy products such as milk and cheese, fruits, pre-washed/topped and tailed vegetables, prepared vegetable salads, whole salad items such as tomatoes or cucumbers, open and canned ready-to-eat fish and fish products such as salmon, tuna or sardines, shellfish, preserves and jams, condiments, bread, confectionery and biscuits.

Recall: A recall is an action taken to remove from distribution, sale and consumption, food which may pose a health risk to consumers.

Records: Evidence, written or otherwise, of a working HACCP system & its prerequisite e.g. cooking temperatures, delivery or cleaning records.

Representative sample: A sample in which the characteristics of the batch from which it is drawn are maintained. This is in particular the case of a simple random sample where each of the items or increments of the batch has been given the same probability of entering the sample.

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

Sample: A set composed of one or several units or a portion of matter selected by different means in a population or in an important quantity of matter, which is intended to provide information on a given characteristic of the studied population or matter and to provide a basis for a decision concerning the population or matter in question or concerning the process which has produced it.

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

Shelf- life: The period during which a food product maintains its microbiological safety and suitability at a specified storage temperature and where appropriate, specified storage and handling conditions.

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

Technical expert: Person who provides specific knowledge or expertise to the audit team.

Temporary Food establishments: are those types of establishments that are set up with a time-limited life (e.g., special events, fairs and festivals, exhibitions etc.).

Traceability: The ability to track any food, feed, food-producing animal or substance that will be used for consumption, through all stages of production, processing and distribution.

Training: An act of increasing a knowledge and skill of an employee for doing a particular job to desired standard by instruction & practice. Training methods include but not limited to class-room training, e-learning etc.

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

Refer to the Codex document CAC/GL 69 – 2008 GUIDELINES FOR THE VALIDATION OF FOOD SAFETY CONTROL MEASURES

Verification: The application of methods, procedures, tests & other evaluations, in addition to monitoring to determine compliance with a HACCP plan.

Vulnerable Groups: The people who are more susceptible than others to foodborne illness e.g. the very young, the very old, pregnant women or people suffering from illnesses.

2. Licensing, Permits, Approvals, Construction, Design and Facilities

2.1 Trade License, Approvals and permits

- a. All food establishments in Dubai must have a valid trade license from the concerned licensing authorities before the start of operation.
- b. The operator of the food establishment must choose the appropriate business activity at the time of obtaining the license.
- c. The business activity on the trade license of food establishment shall be related to food, and the license must clearly state the exact activity the establishment is involved in.
- d. Food establishment shall not carry out any food activity:
 - other than the business activity (or activities) listed in the trade license
 - before obtaining layout assessment approval from the Food Safety Department
 - outside the licensed site before obtaining a permit from the Food Safety Department.
- e. Training and consulting services or any activities related to food safety services or applied nutrition must be approved by the Food Safety Department.

2.2 Approval of Construction Plans and Specifications

Proposed layouts for new construction or renovations to an existing food establishment shall approved by the Food safety Department prior to the construction, renovation or re-construction.

- a. Particulars to be indicated on a layout plan include but are not limited to:
 - i. area and space allocated to food handling and cooking, cleaning, preparation, food storage and seating
 - ii. sanitary fitments, open spaces, restrooms, storage areas
 - iii. all windows and mechanical ventilation system
 - iv. location of equipment & facilities to carry out different activities e.g. Handwashing, pots & dishwashing or any different kind of food preparation, etc.
 - v. all means of exit and entry.
- b. In existing facilities, major alterations that affect the main layout or the process flow shall not be carried out without prior approval from the Food Safety Department. Alteration, addition or deletion which results a change of the approved layout should not be carried out without the prior approval of the Food Safety Department.
- c. Plans for minor alterations that do not involve a change in the main layout and the flow of work such as the installation of shelves in a storeroom do not require prior approval.
- d. Food establishment shall not carry out any activity before pre-opening inspection by the Food Safety Department.
- e. Food establishment with manufacturing & repacking activity must also submit the list of products, process description, control measures & if applicable variance/HACCP plan to the Food Safety Department before commencing any activity.

- f. Where necessary, the information about the preparation area, equipment and process flow shall be provided in digital format via Dubai Municipality's online system.

2.3 Site and Location

- a. Sites for food establishments should be chosen in such a way that they are free from conditions that might interfere with their sanitary operation. Food establishments should be located far enough from waste disposal facilities and incompatible processing facilities so that there is no risk of contamination.
- b. Generally, a minimum distance of 30 meters is recommended from potential sources of contamination. However, a greater or lesser distance could be accepted depending on specific site conditions.
- c. Streets, lanes and other public places or the common part of the building, which are within a minimum of 10 meters around the food establishment, should be kept clean and free of litter, garbage or waste that can attract pests.

Rationale:

Poorly maintained or unhygienic surroundings and facilities can lead to contamination of food. Conditions, which might lead to contamination, include excessive dust, foul odors, smoke, pest infestations, airborne microbial and chemical contaminants, and other similar conditions. Food establishments should be protected from such conditions that would expose the food to contaminants.

2.4 General Requirements for Design and Construction

- a. The design and construction of food establishment should:
 - i. be appropriate for the activities for which the establishment has been approved.
 - ii. provide adequate space & facilities for the activities to be conducted and be suitable for the fixtures, fittings and equipment used for those activities.
 - iii. facilitate effective cleaning and disinfection processes.
- b. The design and construction should:
 - i. help exclude dirt, dust, fumes, smoke and other contaminants;
 - ii. not permit the entry of pests;
 - iii. not provide harbourage for pests; and
 - iv. provide a safe environment for workers and where applicable for customers.
- c. The layout of food establishment should be designed in such a manner that:
 - i. food flow is unidirectional; (i.e. receiving → storage → preparation → cooking → packaging /serving /dispatch)
 - ii. adequate spaces are provided for food preparation, cooking and cooling, storage, storage of equipment / utensils, installation of sanitary fitments, and cleaning facilities;

- iii. food or clean utensils are not conveyed through an open space or open yard that would expose food to contaminants.
- d. Incompatible areas or processes, particularly toilets, clean-up and chemical storage areas, should be separated from food preparation/processing areas. A private home, a room used as living or sleeping should not be used for food operations.

Rationale:

A properly designed and operated food establishment will minimize the likelihood of food contamination. At the same time, unnecessary movement of food and personnel within the establishment increases the likelihood of contamination, and hence should be controlled as much as possible. Well-designed layout is a pre-requisite for effective implementation of any food safety program.

2.5 Spatial Requirements

- a. The space available in a food establishment should be suitable for the business activity, and sufficient to carry out the operations as per the relevant provisions of this Code.
- b. Food activities should only be carried out within the area as delineated in the approved layout plan.
- c. Requirements specific to the type of food establishments including area are provided in Annex (5) of this Code.

Rationale:

Adequate space for food preparation is essential to ensure safe food preparation and shall support the type of operation and the number of customers to be served. For example, too small a kitchen for a restaurant may cause congestion and unhygienic food operation that increases the risk of food contamination. The general rule for food service establishments is that, establishments with larger gross floor area should provide more space for food preparation. The type of food, number of meals produced and the number of people working at the same time should also be considered when deciding the spatial requirements for food service establishments.

2.6 Floor, Walls, Ceilings, Exterior Protective Barriers and Openings

The requirements in this section apply to the floors, walls, ceilings, exterior protective barriers and openings of all areas used for food handling and associated activities such as storage and packaging. The requirement applies to both permanent and short-term use food facilities. The requirements do not apply to facilities set up for food events that run for less than one week where specific permits are used by the concerned department.

2.6.1 Floors

Floors should be designed and constructed in a way that is appropriate for the activities conducted in the food establishment.

- a. Floors in Dry Areas

- i. The floor should be durable, impervious, easily cleanable, and non-slip.
- ii. The floor to wall joints should be coved.

b. Floors in Wet Areas

In areas where the floor could be wet (such as food preparation or processing areas, walk-in chillers, washrooms), and areas subject to flushing or spray cleaning, the floor should be:

- i. light colored;
- ii. durable, easily cleanable and non-slip;
- iii. constructed of a impervious material that is able to withstand regular wet washing, such as tile or resin;
- iv. coved at the wall to floor joints, and sealed;
- v. designed to prevent the pooling of liquids; and
- vi. sufficiently sloped for liquids to drain to adequately sized and constructed floor drains (clause 2.7). Generally, a minimum slope of 2% is recommended.
- vii. If used, clean rubber or plastic mats, excluding carpet or other similar floor coverings, should be designed for easy removal, cleaning and, if necessary, disinfection.
- viii. Absorbent material (e.g. cardboard, newspaper, sponge, unsuitable rubber mats) should not be used as floor material.

Rationale:

Properly constructed floors facilitate cleaning and disinfection. Impervious materials do not absorb water or organic matter, and sloping helps avoid pooling of liquids, which can lead to unhygienic conditions.

2.6.2 Walls and Ceiling

a. Walls

- i. Walls should be designed and constructed in such a way that they can be kept clean.
- ii. In wet areas, walls should be constructed of an impervious material that is able to withstand regular washing.
- iii. In areas where open food is handled, internal surfaces of walls and partitions should be surfaced with smooth, preferably light colored, durable, non-absorbent and easily cleanable materials (e.g. tiles or stainless steel) to a height of not less than 2 Meters. The rest may be painted with a light-color. Junctions between walls, partitions and floors should be coved.

b. Ceiling

- i. Ceiling should be of continuous construction so that there are no empty spaces or wide joints. Although ceilings are less likely to require frequent cleaning, the surfaces should allow ease of cleaning.

- ii. Ceiling in kitchens and food rooms should be of light color and fire proof.
- iii. Ceiling and overhead fixtures are to be constructed in a way that prevents accumulation of dirt. There should be adequate measures in place to reduce condensation and subsequent growth of undesirable mould.
- c. **False Ceiling**
 - i. False ceiling if used in food handling areas should have smooth, easily cleanable and impervious surfaces.
 - ii. Access openings to the space above false ceiling should be provided to facilitate cleaning and detection of signs of pest infestation.

Rationale:

Light colored walls and ceilings enable easy detection of dirt for prompt removal. Durable, impervious and easily cleanable surfaces facilitate cleaning work. However, note that the emphasis should be on cleanliness which is the primary objective of this provision. The space between false ceiling and the original ceiling can get dirty and harbor pests. Periodic checks and cleaning are necessary to maintain a healthy and hygienic work environment.

Exterior openings must be managed in a way to prevent entry of pests and contaminants, and to ensure comfortable working environment.

2.6.3 Exterior Protective Barriers and Openings

- a. Exterior openings should be protected against the entry of pests. Examples include:
 - i. filling or closing holes and other gaps along the floor, walls and ceiling;
 - ii. solid, self-closing, tight-fitting doors; and
 - iii. screen doors that open outward and are self-closing.
- b. If windows or doors are kept open for ventilation or other purposes, the exterior openings should be protected against the entry of pests by means such as screens, properly designed and installed air curtains or other effective means to restrict the entry of pests.
- c. Windows, doors and other openings should be constructed in a way that prevents accumulation of dirt.

2.7 Floor Drains

- a. Floor drains must be designed to:
 - i. effectively remove waste water;
 - ii. be easily accessible for cleaning and equipped with removable and cleanable covers.
- b. Drain lines must be sloped, properly trapped, vented and connected to a proper drainage system.
- c. The drainage system must be constructed in a way that there is no cross-connection between the drains or drain lines, and:

- i. the water supply; or
- ii. the food product lines or equipment.

Rationale:

The accumulation of waste water on the floor and drain of a food establishment can lead to insanitary conditions. Properly designed drains and drain lines can eliminate the accumulation of waste water and prevent entry and growth of pests.

2.8 Stairs and Mezzanines

- a. Stairways should be:
 - i. located so as to minimize the risk of food contamination; and
 - ii. constructed of materials that are impervious and easily cleanable.
- b. Mezzanines should:
 - i. not be located over food preparation areas where splashing or dripping could pose a contamination risk
 - ii. be constructed of solid masonry or metal construction
 - iii. be equipped, where appropriate, with raised edges of a height sufficient to prevent contaminants from falling onto surfaces below.
- c. Stairs and mezzanines shall meet all the requirements of the concerned department of Dubai Municipality prior to the construction.

Rationale:

Stairs and mezzanines, over work areas or near these areas can act as a source of contamination. Proper design and construction can prevent contamination.

2.9 Equipment and Utensils

Food establishments shall use only safe and suitable equipment and utensils at all times. Equipment and utensils should be designed and constructed to be durable and to retain their characteristic qualities under normal use and conditions.

2.9.1 Equipment and utensils Design and Layout

- a. Equipment and utensils shall be made of safe and suitable material that will not affect the quality and safety of food.
- b. Materials used for making the equipment and utensil should be resistant to denting, pitting, chipping and cracking. Food contact surfaces should be smooth so as to enable them to be kept clean, and where necessary disinfected.
- c. Materials used in the construction and repair of equipment and utensils shall be non-toxic, not affected by foods, cleaning compounds, non-absorbent and durable under normal use. They

shall not impart odor, color or taste nor contribute to the contamination of food. They should also maintain their original properties under repeated use. Painted food-contact surfaces are prohibited.

- d. Equipment and utensils shall be free from difficult-to-clean internal corners and crevices. Food contact surfaces shall be readily accessible for cleaning. Where necessary, equipment should be movable or capable of being disassembled to allow for maintenance, cleaning and disinfection.
- e. Hard maple or other equivalent non-absorbent material meeting the criteria stated in this Code may be used for cutting blocks and cutting boards, baker's tables and work surfaces. Food contact surface should be smooth, easy to clean.
- f. Canvas, cloth and other porous material, other than single-service use, are prohibited as a food- contact surface.
- g. Equipment should be used in accordance with its intended use.
- h. Equipment used to cook, heat treat, cool, store or freeze food should be designed to achieve the required temperatures as rapidly as necessary to ensure food safety.
- i. Equipment containing bearings and gears requiring lubricants shall be designed and constructed so that the lubricant shall not leak, drip or be forced into the food or onto food-contact surfaces. Food-grade lubricants are to be used on or within food-contact surfaces.
- j. Where specified in this document, the food establishment shall use equipment that are approved by the concerned department of Dubai Municipality.

2.9.2 Location of Equipment

- a. Equipment used in a food establishment should be suitably located or positioned so that it:
 - i. is not exposed to any sources of contamination;
 - ii. can be maintained, cleaned and disinfected;
 - iii. can be inspected easily;
 - iv. may be properly vented when required; and
 - v. is installed in such a manner to allow adequate cleaning of the equipment and the surrounding area.
- b. Equipment and utensils used in processing, handling and storage of foods (including single-service and single-use articles) shall not be located in staff locker rooms, toilet rooms, garbage storage rooms, mechanical rooms, under sewer or water lines not shielded to intercept leakage/condensate, under open stairwells, or any area where the equipment may become contaminated.

- c. Unobstructed aisles, walkways and working spaces shall be sufficiently wide to permit employees to perform their duties readily without contamination of food or food-contact surfaces by clothing or personal contact.

Rationale:

Equipment used in a food establishment shall be kept in a clean and sanitary condition to minimise the risk of contamination of food by equipment surfaces. Therefore, when considering the location of equipment, several factors should be taken into account, including ease of cleaning, the intended use of equipment, and the methods for prevention of contamination of the equipment. Special care should be taken in the placement of food equipment which will be used to process, handle or store food. Such equipment shall not be located in areas where it may become contaminated, since the surfaces of the equipment will be coming in direct contact with food.

2.9.3 Fixed Equipment

- a. Equipment that is fixed (i.e., not easily moveable) should be either:
 - i. sealed to adjoining walls, floors and equipment; or
 - ii. positioned and designed in such a manner to comfortably allow cleaning under and around the equipment.
- b. Equipment that is intended to be “Clean in Place (CIP)” should be designed and constructed so that:
 - i. cleaning and disinfection solutions circulate through a fixed system and contact all interior food contact surfaces
 - ii. the system is self-draining or capable of being completely drained of cleaning and disinfectant solutions
 - iii. there are inspection access points to ensure all interior food contact surfaces throughout the fixed system are being effectively cleaned.

2.9.4 Calibration and Standardization

- a. Equipment or instruments used for measuring or monitoring products or processes that could have an impact on product safety or legality should be calibrated or standardized to a standard recognized by Dubai Municipality.
- b. The calibration or standardization should be done internally or externally at a pre-determined frequency necessary to ensure proper functioning of the equipment.

2.10 Lighting

- a. Lighting and lighting fixtures should be designed to prevent accumulation of dirt and be easily cleanable.

- b. Food establishment shall provide sufficient natural or artificial light to ensure the safe and sanitary production of food and facilitate cleaning of the establishment. Unless otherwise specified, the minimum lighting intensities should be:
 - i. 110 lux (at a distance of 89 cm / 3feet above the floor) in walk-in-chillers dry food storage areas, and in all other areas and rooms during periods of cleaning;
 - ii. 220 lux (at a distance of 89 cm / 3 feet above the floor) in areas where fresh produce or packaged foods are sold or offered for consumption; areas used for hand washing, ware-washing, and equipment and utensil storage; and in toilet rooms; and
 - iii. 500 lux at the surface where a food handler is working with unpackaged high-risk foods or with food utensils and equipment such as knives, slicers, grinders or saws where employee/worker safety is a factor.
- c. Except as otherwise specified, lighting fixtures should be shatter proof or be shielded with shatter- proof coverings in areas where they are exposed to food, equipment, utensils, linens or unwrapped packing materials. Shielded lighting is not necessary in areas used only for storing food in unopened packages or where the food cannot be affected by broken glass falling onto it.

Rationale:

Adequate lighting promotes cleanliness by facilitating the identification of unclean areas. Shielding of lights to prevent the contamination of food from glass fragments in the event of breakage is an essential public health protection measure. In addition to that, risk of breakage also occurs when diffusers are removed for cleaning or changing tubes.

2.11 Ventilation

- a. Food establishment should be provided with adequate mechanical or mixed mode ventilation to ensure good indoor air quality.
- b. The design and installation of mechanical ventilation systems should be based on the requirements provided by the concerned Department of Dubai Municipality.
- c. Ventilation systems should be designed and installed in a way that:
 - i. they are sufficient in number and capacity to prevent grease or condensation on the walls and ceiling;
 - ii. the filters or other grease extracting equipment are easily removable for cleaning and replacement if not designed to be cleaned in place;
 - iii. the exhaust ventilation hood system components such as hoods, fans, guards, and ducting should prevent grease or condensation from draining or dripping.
 - iv. they are equipped with make-up air systems, installed in accordance with the requirements of the concerned Department of Dubai Municipality.

- v. if vented to the outside, ventilation systems should not create a public health hazard or nuisance or unlawful discharge.
- d. Where applicable (process that requires microbiological quality of air to be controlled) food establishment shall provide air quality system to control or minimize risk from airborne microbiological or other contamination. Food establishment should establish protocols for air quality monitoring in areas where products, which support the growth or survival of microorganisms, are exposed.
- e. Mechanical ventilation systems should be installed in such a manner that airflow is directed from the clean area to the contaminated area.
- f. Ventilation systems should be cleaned in accordance with the requirements stipulated by the concerned department of Dubai Municipality.

Rationale:

The air supplied to the food premises shall be of sufficient quality so as not to contaminate the equipment or the food. Unclean air, excessive dust, odours, or build-up of condensation or grease are all potential sources of food contamination. Build-up of grease/fat in equipment such as range hoods also pose a fire hazard.

2.12 Storage Areas

- a. Food establishments require adequate storage facilities for all food & non-food items. During storage, food items shall be protected from contamination such as water leakage, pest infestation or any other insanitary condition.
- b. The following criteria should be applied to all storage areas:
 - i. adequate shelving should be provided in order that all materials can be stored off the floor. All food and food items and equipment should be stored at a minimum of 15 cm (6 in.) off the floor on racks, shelves or pallets. Shelving which is not sealed to the floor should have a clear vertical space of at least 20 cm between the bottom shelf and the floor to facilitate cleaning. Shelving units should be at least 20 cm or more away from the walls to allow for access for cleaning, and permit easier visual inspection;
 - ii. shelves should be constructed of materials which are durable and easily cleanable.
- c. The facilities used for the storage of food, food ingredients, equipment and packaging should be designed and constructed so that they:
 - i. are cleanable;
 - ii. are located in a clean and dry location;
 - iii. restrict pest access and harbourage;
 - iv. provide an environment which minimizes the deterioration of stored materials; and
 - v. protect food from contamination during storage.

- d. The facilities used for the storage of food, food ingredients, equipment and packaging materials should not be located:
 - i. in areas used for the storage of soiled or contaminated objects and materials;
 - ii. in locker rooms, toilets, garbage or mechanical rooms;
 - iii. under sewer lines that are not shielded to intercept potential drips; or
 - iv. in the same room/vicinity as chemicals/pesticides.
- e. Non-food agents such as disinfectants, detergents, pesticides and other similar products shall be stored separately in a lockable area that prevents the potential for contamination of food, food ingredients, food contact surfaces and non-food materials such as utensils, linens, single-service and single-use utensils, and packaging materials.
- f. Personal belongings and uniforms of employees should be stored separately from food storage and food preparation areas.

Rationale:

Contamination of food, food ingredients, equipment, and non-food materials can occur when improper storage facilities are used. Separation of food and equipment from toxic and soiled materials ensures that the opportunity for cross-contamination is minimized.

2.13 Water Supply

Where applicable, the food establishment must meet the requirements stipulated in any local, national, or regional standards relevant to sourcing, storage and transportation of water; filtration; and materials and systems that come in to contact with water.

2.13.1 Source of Water

- a. Adequate supply of potable water shall be available for food preparation and cleaning purposes in food establishments and any commercial or residential establishments where food or food contact materials are stored, processed, packaged or displayed.
- b. Water should be obtained from a source approved by the Dubai Municipality which includes water supplied by Dubai Electricity and Water Authority (DEWA) and other licensed and authorised commercial suppliers of water. In the absence of such a direct supply system from DEWA, the food establishment must, as a part of its food safety management system, establish a system to periodically evaluate the quality and safety of the water used in the facility to ensure that the standards of portable drinking water are met at all times.
- c. Where non-potable water is used for non-food purposes, for example fire control, steam production, refrigeration and other similar purposes, a separate duly identified water supply system should be used. Non-potable water lines should not be connected with potable water systems.

- d. Steam used directly in contact with food shall not contain any substance that presents a hazard to health or is likely to contaminate the food.

2.13.2 Water Storage and Transportation

- a. Water storage and overflow tanks should be made of safe and suitable food contact materials and designed and constructed in a manner that prevents contamination.
- b. Commercial water tanks must be made of materials approved by the concerned regulatory authority.
- c. These tanks should be provided with appropriate covers to prevent the access of animals, birds and other extraneous matters.
- d. Water storage tanks shall be maintained clean at all times.
- e. Cleaning and disinfection of tanks should be carried out at least twice per year or when monitoring indicates that cleaning is necessary.
- f. Tank cleaning shall be carried out by a water tank cleaning company approved by the concerned department of Dubai Municipality. Once the tank is cleaned, water samples should be tested for safety and quality by an approved laboratory.
- g. When a storage tank is shared by several food establishments (such as in a mall), the food establishment should be able to show documented evidence that the water tank is cleaned as required.
- h. Cleaning materials, chemicals and processes must meet the requirements listed in clause 4.2.4 of this document.
- i. Water from storage tanks should be tested once in three months to ensure that the samples meet the safety and quality parameters set in the UAE.S GSO 149 standard for non-bottled drinking water and in the Drinking Water Law.
- j. Food establishments shall maintain a documented evidence for cleaning and disinfection, analysis report and any other relevant document pertaining to maintenance of the water tank and such documents shall be presented to authorized officials from the Dubai Municipality

2.13.3 Water Coolers and Dispensers

- a. Water coolers must suitable, well designed to facilitate cleaning, and located in areas where the safety of water will not be compromised.
- b. Water cooler shall be well maintained and cleaned according to the manufacturer's instructions or cleaned by the manufacturer.

2.13.4 Water Filters

- a. Water filters that are used on coolers and dispensers should be safe and suitable for the purpose, changed when necessary to prevent any accumulation of dirt or formation of biofilms.
- b. Where applicable and specified, filters that meets the standards or certification requirements of the concerned department or the federal authority.

Rationale:

Water can be a source of food contamination and thus must be of good standard all the time. Even though the water source is good, a bad supply system of storage tank can recontaminate the water before it is consumed. A safe distribution system and regular cleaning and disinfection of water tanks will ensure that the water is clean and safe to drink and also avoid contamination of food or equipment.

2.14 Sewage and Solid Waste Disposal

- a. Sewage disposal systems shall meet all the requirements of the concerned department of Dubai Municipality.
- b. Disposal of sewage and solid waste shall be done in a hygienic manner which does not expose the food establishment or food products to potential contamination.
- c. Food establishments should follow the requirements for the separation of various solid-waste streams as outlined by the concerned department of Dubai Municipality. Solid waste containers within the food establishment should:
 - i. be sufficient in number and accessible
 - ii. be designed to minimize both the attraction of pests, and the potential for airborne contamination
 - iii. be identified as to their contents
 - iv. have functional foot operated lids, if closed containers are used.
- d. Garbage storage rooms and containers should be emptied, cleaned and disinfected as often as necessary.
- e. Solid waste containers/receptacles located outside the establishment should be:
 - i. equipped with covers and closed when not in use
 - ii. maintained in a manner that does not attract pests
 - iii. located away from the entrance of the food
 - iv. preferably stored in a pest proof structure.

Rationale:

The proper disposal of sewage and solid waste is critical in preventing the spread of pathogens in the food premises. In addition, the sanitary disposal of both sewage and solid wastes, and the maintenance of waste containers and facilities, will minimize the presence of pests inside and outside the establishment

Open waste containers can be used in a pest free environment if such bins can be emptied and cleaned frequently. Where bins with lids are used, there is always a human tendency to open the lid with hands. Food handlers should refrain from touching the lids with hands.

2.15 Grease Traps

- a. Grease traps should, whenever possible, be located outside the establishment.
- b. Grease traps should be of a suitable type and be regularly inspected. The greasy waste should be promptly removed, and the adjoining floor surfaces should be cleaned thoroughly afterwards.
- c. Grease traps shall meet all the requirements of the concerned department of Dubai Municipality.

Rationale:

Waste water from food establishment carries a large quantity of grease, which will solidify and cause blockages in drains. It must be removed from the water entering the drain. A blocked drain / sewer causes back-flow of waste water and emits bad odor, posing a hazard to food safety and environmental hygiene.

2.16 Plumbing System

- a. The plumbing system conveying water and waste requires the approval from the concerned department of Dubai Municipality.
- b. Water conditioning devices such as water filters or screens should be of a type that permits easy disassembling to facilitate periodic servicing and cleaning.
- c. In order to prevent backflow through cross connections, back-flow prevention devices (e.g. air gaps, vacuum breakers) should be installed wherever required.
- d. Utility service lines and pipes should be concealed or fitted in a way to prevent the accumulation of dust & dirt & should not obstruct or prevent cleaning of the floors, walls, or ceilings.

Rationale:

Cross connections and backflow can contaminate the drinking water supply. Proper identification of the supply system and drainage systems allows easy detection of problems and correction

2.17 Overhead Utility Lines

- a. Utility lines such as gas, electrical, sewage and water lines, as well as cooling ducts should be suspended away from work areas or areas of open food to minimize the potential for contamination.

- b. They should exhibit no sign of flaking rust or paint.
- c. Lines should be:
 - insulated, where appropriate, to prevent condensation
 - constructed and covered with a suitable material to minimize the build-up of soil
 - easily cleanable; and
 - labelled or color-coded.
- d. Lines carrying contaminated or hazardous materials, such as sewer or floor drain lines, shall be located sufficiently distant from any product or product contact surfaces to prevent any risk of contamination.

Rationale:

Conditions such as dripping condensation or excessive dust from overhead utility lines can be a source of contamination when the lines are suspended over work areas or areas of open food. The consequences of contamination due to leakage are significantly greater with lines carrying sewage, hazardous chemicals or highly contaminated materials.

2.18 Hand wash Stations

- a. At least one hand wash station shall be provided in each food preparation area. Additional hand wash stations may be required depending on the type and extent of activity.
- b. Hand wash facilities shall:
 - i. be located to allow convenient access and use by food handlers and other workers
 - ii. be equipped with liquid soap and single-use paper hand towels and/or hand dryer
 - iii. provide an adequate flow of water at a suitable temperature (not too cold nor too hot)
 - iv. be easily cleanable, and maintained in a clean condition
 - v. indicated with clear signage
 - vi. not be used for purposes other than hand washing.

Rationale:

Improper hand washing is a major contributing factor to outbreaks of foodborne illnesses. Provision of proper and adequate hand washing facilities is essential to minimize food contamination and maintaining personal hygiene. The temperature of the water should be suitable to encourage hand washing. If the water is too hot or too cold, employees might have a tendency to avoid hand washing.

2.19 Toilet Facilities and Dressing Areas

- a. Adequate, suitable and conveniently located toilets should be provided for food handlers. The following criteria should be considered:
 - i. toilets should be conveniently located and accessible to workers during all hours of operation;

- ii. toilets should be completely enclosed and provided with a tight-fitting and self-closing door;
 - iii. toilets should have a hand wash station equipped with liquid soap and single use paper towels and/or hand dryer & prominently displayed hand washing signage board;
 - iv. toilets should be easily cleanable, well ventilated, and well lit; and
 - v. toilets shall not open directly into a food area where food or packaging material is stored, handled or packed;
 - vi. when adjacent to a food area, the toilet should be separated with a double door and ventilated space.
- b. Toilet rooms for the public, if provided, should be completely enclosed and separated from the food preparation and storage areas.
 - c. Dressing and changing areas should be provided if workers routinely change their clothes in the food establishment. Dressing and changing areas should be:
 - i. easily cleanable;
 - ii. well ventilated and well lit;
 - iii. provided with lockers or other suitable facilities for the storage of workers' possessions and uniforms;
 - iv. separate for male and female employees.

Rationale:

Properly located and equipped toilet facilities are necessary to protect the equipment, facility and food from fecal contamination, which may be carried by insects, hands or clothing. Toilet facilities kept clean and in good repair, minimize the opportunities for the spread of contamination.

2.20 Cleaning Facilities

- a. Every food establishment should have sufficient and suitable cleaning materials, equipment and facilities to meet the cleaning requirements of the operation.
- b. The service sink or curbed cleaning facility, equipped with a floor drain, should be conveniently located for the cleaning of mops or similar wet floor cleaning tools, and for the disposal of mop water and similar liquid waste. Such facilities should be located away from food handling areas.
- c. Adequate storage facilities should be provided away from food handling areas to store brooms, mops, pails, and cleaning compounds. Toilets should not be used for storing cleaning materials or equipment.

Rationale:

Liquid waste from wet floor cleaning methods are contaminated with microorganisms and filth. A service sink or curbed cleaning facility with a drain allows for the sanitary disposal of this waste water in a manner that will not contaminate the food. Designated storage areas for brooms, mops, pails, etc., will assist in the sanitary operation of the premises during periods when they are not in use.

2.21 Temporary Food Establishments & Facilities

This requirement covers food establishments including mobile food trucks, vending machines, desert events and camps & other external events that are temporary in nature.

- a. Temporary food establishment shall meet all the requirements of Clause 2 of this Code and shall have an operational food establishment.
- b. A prior approval from the Food Safety Department and any other concerned department is required to operate such food establishments.
- c. Food establishment should follow relevant temperature requirements and other handling and storage recommendations of this Code.
- d. Adequate measures should be in place to control both intentional and unintentional contamination in temporary food establishment.
- e. Except for machines that vend canned beverages, if located outside, a machine used to vend food shall be provided with overhead protection.
- f. When the food is supplied to a third party such as an event organizer, the food establishment that supplies the food should ensure that handling requirements of food are clearly communicated in writing to the person in charge of the event.

2.22 Liquid Foods and Ice

- a. In equipment that dispenses or vends liquid food or ice in unpackaged form, the delivery tube, chute and orifice should be designed such that:
 - i. Splashes and drips (including drips from condensation) are diverted away from the container receiving the food by means of barriers, baffles or drip aprons.
 - ii. Tubes, chutes and openings should be protected from manual contact by being recessed.
- b. Where the item is dispensed, the equipment should be provided with means to prevent back siphonage.
- c. Delivery tubes, chutes and openings shall be protected from dust, insects, rodents and other contamination by a self-closing door if the equipment is:
 - i. located outdoors and is not protected from precipitation, wind-blown debris, pests and other contaminants present in the environment; or
 - ii. available for self-service of food during hours when it is not under the full-time supervision of a food employee.

Rationale:

For vending machines that dispense liquid food or ice, it is important to prevent the entry of condensate or splash, which may contaminate the food product. Food contact surfaces which divert liquid food into the receiving container need to be protected from contact by customers/people to prevent contamination of the food product. A self-closing door on outdoor machines or unsupervised machines further protects against accidental or malicious contamination.

2.23 Self-Service Beverages

- a. Self-service beverage dispensing equipment should be designed to prevent contact between the lip-contact surface of glasses or cups that are refilled and the dispensing equipment actuating lever or mechanism and the filling device.
- b. Beverage equipment that utilizes carbonation equipment (CO₂) should incorporate a back-flow, back-siphonage prevention device (check valves) to prevent the migration of the carbonated beverage into copper water supply lines.

Rationale:

Through proper design of the dispensing equipment, contamination of the lip-contact surfaces of the refillable containers can be avoided, and the risk of cross-contamination reduced. As well, back-flow into water supply lines has resulted in incidents of copper poisoning after consumption of the dispensed beverage.

2.24 Vending Machines

2.24.1 Beverages in Paper-Based Packaging

Vending machines designed to store beverages that are packaged in containers made from paper products should be equipped with diversion devices and retention pans or drains for container leakage.

2.24.2 Vending of High-Risk Foods

A machine vending high-risk foods shall have an automatic control that prevents the machine from vending food if there is a power failure, mechanical failure or other condition that results in an internal temperature that cannot maintain the food temperature required in this Code.

Note: *The automatic control shall prevent the machine from dispensing food until it is restocked and can maintain food at required temperatures.*

Rationale:

Vending machines require a “fail-safe” device that would prevent the dispensing of high-risk foods, in the event of mechanical or power failures which could subject them to temperature abuse.

2.25 In-house filling of drinking water

The following general rules apply to food service businesses that provide drinking water in reusable bottles that are filled in-house.

2.25.1 General requirements

- a. There should be sufficient space to operate the filling station, store bottles and bottled water, and sufficient facilities to clean and disinfect bottles.
- b. The filling station shall be suitably designed for cleaning and maintenance, and set up in a way to prevent possible contamination of clean bottles and drinking water.
- c. Bottles should be suitable for reuse and made of safe and durable material that can withstand cleaning and disinfection cycles.
- d. Re-usable water bottles shall be clearly labelled as "Filtered Tap Water."
- e. Filling(production) date shall be mentioned on the bottles.
- f. Filled bottles shall be tightly sealed immediately after filling, using clean and sterile cap
- g. Product must be tested monthly in an accredited laboratory as per the UAE.S GSO 1025 standard for bottled drinking water.
- h. Verification of analysis report must take place after every testing and documents shall be kept available and presented at the time of inspection by Dubai Municipality.
- i. Bottled water must be tested once in two months or tested as per the verification plan established as a part of the food safety management system. Testing must be done in an accredited laboratory as per the UAE.S GSO 1025 standard for un-bottled drinking water, the Drinking Water Law.
- j. All preventative maintenance, machine cleaning, filter changing, and routine maintenance shall be documented
- k. The facility shall implement a procedure to check for the presence of any cleaning chemical residual and a disinfection procedure shall take place to insure the sterility of bottles, and temperature of disinfection should be maintained.
- l. Process of in-house bottling of water should be a part of the food safety management system and the process analysis specifically addressed in the HACCP plan.

2.25.2 Storage condition

- a. Bottles shall be stored in an isolated area, dry and covered to avoid exposure to any contaminate until filling.
- b. Bottled drinking water shall be stored:
 - i. away from any poisonous materials and contamination sources.
 - ii. in good and well-ventilated store free from distinctive odours.
 - iii. protected from direct sunlight and high temperature.
 - iv. distribution shall follow the same as the storage conditions.

Rationale

Adequate precaution must be taken prior to filling, during filling, and while storage to ensure that water is free of any contaminants. In-house bottling process, when uncontrolled, can lead to contamination of water and put the consumer at risk. Use of bottles made of unsafe material can put the consumer at risk.

Biofilms are formed easily in equipment that are poorly designed for cleaning and maintenance. Such biofilms can impact the safety of water. Poorly designed bottles can be difficult to clean.

3. Control of Hazards in Food

Clause 3 of the Food Code is based upon the principle that food safety is best ensured through the identification and control of hazards in the production and handling of food as described in the Hazard Analysis and Critical Control Point (HACCP) system, adopted by the joint WHO/FAO Codex Alimentarius Commission, rather than relying on end product standards alone. The Food safety Department requires all food establishments to implement a risk-based food safety management system where hazards and risks are identified by the food establishment. Control measures listed in this section should be validated in the context of the daily operations and where necessary more specific control measures applied along the food supply chain.

3.1 Management of Food Safety

The food establishment operator is responsible for the safety (and suitability) of the produced food. The management shall ensure that the requirements of laws and regulations on food safety are observed. Compliance with these requirements enable the food establishment operators to demonstrate their commitment and their responsibility with respect to the production & supply of safe products.

3.1.1 Management – Person in Charge

- a. Establishment shall meet all specific requirements of Annex 4 of this Code.
- b. All food establishments shall employ at least one (1) full time, on-site Person in Charge (PIC) certified in food safety.
- c. All food service establishments where high-risk, ready to eat or raw foods are prepared shall have at least one PIC certified in food safety present in the establishment during all shifts (duration) of food establishment operation. The PIC should be responsible for and should actively oversee all food establishment operations that could have an impact on the safety of the food.
- d. Each certified PIC shall possess knowledge of food safety principles and practices as demonstrated by passing the assessment acceptable to the Food Safety Department.
- e. Once the employment of a PIC is terminated, establishments can take up-to thirty (30) days to designate a new PIC. The proposed PIC should enrol for the training Program and be certified within 45 days.
- f. The PIC should be registered on Foodwatch Platform prior to the training and shall be an approved user.
- g. PIC shall not share his or her user information and password for Dubai Municipality web-based services or online services with anyone else.

3.1.2 Roles and Responsibilities of Person in Charge

- a. The PIC should be competent and have appropriate knowledge on food safety risks associated with the type of business.
- b. The PIC should ensure that the establishment maintains policies and procedures for all employees to follow in order to assure the production, sale, and/or dispensing of safe food products.
- c. The PIC should provide effective supervision of safe food practices, conduct regular inspection of the food establishment, address potential food risks, and, where necessary, take appropriate corrective action.
- d. The PIC should maintain measures of accountability for meeting food safety responsibilities, including ensuring that:
 - i. all employees are trained before they start of work; and
 - ii. trained employees are competent and are carrying out responsibilities as required.Training should be provided based on the criteria stipulated under clause 6 of this Code.
- e. The PIC shall use the Foodwatch platform to perform the daily checks and report immediately the following observations:
 - i. Pest infestations to the pest contractors
 - ii. Any illness among employees
 - iii. Any rejection of food delivery
 - iv. Any rejection of food transportation vehicle from a supplier
 - v. Any failure in food equipment.

3.1.3 Food Safety Management Systems

- a. All food establishments should implement and maintain a Food Safety Management System recognized and approved by the Food Safety Department. The design, implementation and certification of the food safety management system shall be based on the requirements listed in Annex 4 of the Food Code.
- b. In food establishments where third party food safety management system certification is mandatory, the establishment shall be certified to ISO 22000:2018 standard or any other stand/scheme accredited by the Emirates International Accreditation Centre.
- c. Where mandated by the Food Safety Department, the food establishment shall use new and evolving digital technologies to:
 - analyse risk, develop and manage procedures and practices
 - replace paper-based record keeping and documentation
 - manage day to day tasks, follow up issues.

3.1.3.1 General Requirements for the Food Safety Management Systems

A food establishment should:

- a. Systematically examine all its food handling operations in order to identify the potential hazards that may reasonably be expected to occur.
- b. Develop and implement a food safety management system to control the hazard or hazards are identified in accordance with paragraph (a).
- c. Maintain all relevant documentation digitally; and paper based when digital solutions are not available
- d. Review the system regularly and make necessary changes to it when any significant modification is made to the product, process, or any step, or in the event of a justified food complaint or food related incident.

3.1.3.2 Auditing of the Food Safety Management System

Food establishments where food safety auditing is mandated by Food Safety Department should:

- a. Ensure that the food safety Program is audited by a third-party food safety auditor approved by Dubai Municipality at an auditing frequency applicable to the food establishment
- b. Make the documents and records available to any food safety auditor who has been requested to conduct an audit
- c. Retain copies of all audit reports conducted by a food safety auditor and
- d. Provide the audit details and reports to the Food Safety Department when necessary; and to the inspection officials upon their request.

3.1.3.3 Content of the Food Safety Management System

A food safety management system should include:

- a. All processes and activities related to preparation, sale, distribution or display of all food items in the scope
- b. Systematic identification of the potential hazards that may be reasonably expected to occur in all food handling operations of the food establishment
- c. Steps where each hazard can be controlled and the means of control
- d. Systematic monitoring of those controls
- e. Appropriate corrective action when the hazard, or each of those hazards, is found not to be under control
- f. Regular review of the system to ensure its adequacy; and

- g. Appropriate records to be made and kept by the food establishment to demonstrate action taken in relation to, or in compliance with, the food safety management system.

Note: *The detail requirements of HACCP based food safety management system is available in Annex 3 of this Code.*

3.2 Food Handling and Processing

3.2.1 General requirements for processing food

- a. Food establishments must take all practicable measures to process only safe and suitable food.
- b. Food establishments when processing food should;
 - i. take all necessary steps to prevent food being contaminated; and
 - ii. use a process step that is reasonably known to achieve the microbiological safety of food.
- c. Food establishments shall process & display high-risk foods under required time & temperature control to minimize the growth of pathogenic bacteria in the food.

3.2.2 Food Source

A food establishment shall take all practicable measures to ensure that it accepts only safe food. The PIC should provide specific information to suppliers for each ingredient, where necessary, to ensure the delivery of a safe & a good quality product.

3.2.2.1 Approved Sources

Food establishments shall obtain food and food ingredients from sources that are approved by Food safety Department. Approved food sources are establishments that are licensed to operate in the United Arab Emirates and are inspected by the local regulatory authority. Food establishments shall have appropriate system in place to ensure that safe food & food ingredients are received if sources are located outside United Arab Emirates.

- a. Food establishments should maintain sufficient information related to food; the name, business address of the supplier, vendor, manufacturer or packer or the importer.
- b. Food establishments that serve raw or lightly cooked (such as raw oysters, sushi, kebab, steak tartar, carpaccio), should obtain detailed information from the supplier about the source and microbial safety of the products. Relevant records should be maintained as an evidence.
- c. Food establishment shall ensure that all their suppliers are registered on the Foodwatch platform and the relevant business activities have been declared and approved by the system.

Rationale:

Safe food starts with reputable and reliable food suppliers who meet food hygiene and safety standards. These suppliers operate in a manner that prevents and controls contamination of foods and ensure the foods are safe for human consumption.

3.2.2.2 Unapproved Sources

Food prepared in a private home, unlicensed establishments, mobile vendors, open trucks or any other place, which is not approved by the Food Safety Department, shall not be commercially offered for human consumption.

3.2.3 Food Receiving

Foods that are imported to the different Emirates are inspected by the respective local authorities at the port and then released to the market. Instructions provided at the time of the release should be followed by the importing establishment and the release documents should be verified by the retail establishments. Food establishments should always verify that their supplies are delivered safely. The receiving of food items shall be performed in protected and clean area.

3.2.3.1 Inspection of Incoming Food

- a. Inspection should be carried out at the time of receipt of food from the supplier to ensure that:
 - i. Food and packaging are free from visible damage, pests and other contaminants;
 - ii. food is in appropriate condition for intended use;
 - iii. food is received with appropriate documents;
 - iv. food is transported in a suitable vehicle approved by concerned authority and is verifiable on the Foodwatch platform.
- b. Foods that require temperature control for safety are to be delivered at temperatures stipulated in clause 3.4 of this Code.
- c. Food containers and packages should be intact and free from damage.
- d. Food items should be properly labelled with ingredient listing & date coding etc.
- e. If the food is pre-packaged, the time gap between the date of receiving and expiration date should be sufficient to use the product and avoid wastage of stock.
- f. Unacceptable food should be returned, and the details should be recorded via Foodwatch.

- g. Food products should be quickly moved into storage after the inspection.

Rationale:

Food contaminated with pathogenic microorganisms, chemicals and foreign matters may compromise food safety. Therefore, food establishment should not accept food known (or suspected) to be contaminated with these substances.

Most pathogenic bacteria grow and multiply rapidly at temperatures between 5°C and 60°C. At temperatures lower than 5°C and higher than 60°C, bacterial growth slows down or stops. However, there are bacteria that can grow slowly up to a temperature of -2°C and most bacteria can survive cold temperatures and resume multiplication later when conditions become suitable again. This range of temperatures between 5°C and 60°C is normally called the TEMPERATURE DANGER ZONE. High-risk food may be contaminated by pathogenic bacteria which can multiply to dangerous levels at ambient temperatures. As such, high-risk food should be kept at or below 5°C, or at or above 60°C during delivery, to prevent growth of these bacteria. The temperature of the food may go up during the delivery time, but this time should be as short as possible.

Freezing is a process in which the temperature of a food is reduced below its freezing point and the majority of the water inside the food undergoes a change in state to form ice crystals. Freezing preserves food for extended period of time by preventing the growth of micro-organisms that cause food spoilage and foodborne illnesses. To maintain the quality of frozen food, a temperature of -18°C or less is preferred.

3.2.3.2 Product Identification

- a. All food products received at a food premise should be properly packaged and labelled, according to requirements outlined by the Food Safety Department or any other relevant standard such as the Gulf Standards.
- b. Invoices, receipts, and lot coding information should be retained, to allow tracking of unlabelled products (such as raw fish, oyster, carcasses, produce or bakery products) or split lots.
- c. In retail food service establishments such as restaurants and catering establishments, if the original packaging of the food is removed after receiving, the same production and expiration dates on the original label should be marked on the new label. The establishment should have a documented internal policy for date marking of products that are stored after the removal of the original packing. However, the foods that are consumed or heat processed on the same day are exempted from this requirement.

3.2.3.3 Ingredient inspection and control

- a. All ingredients used in food preparation should be inspected prior to their use.

- b. Any ingredients that are off-colour, have strange odours, show evidence of pest contamination or suspected to be contaminated in any other manner should be discarded.

Rationale:

A food establishment should be able to identify the food that they have in the premises in order to facilitate tracing products in the event of a recall or a food incident. The information can be obtained from an invoice, receipt or the packaging of the food when necessary and such documents should be retained for a duration not less than the shelf life of the product

3.2.4 Food Additives

- a. Food additives that are banned by the Food safety Department shall not be used.
- b. All additives shall be used at a concentration recommended in the relevant product standard. In the absence of a standard, scientific validation is necessary.
- c. Manufacturers and suppliers of food additives should provide information on safe usage of additives to the end user.
- d. Food handlers who handle additives should be appropriately trained to use additives.

3.2.5 Handling Raw Food

- a. Raw and ready-to-eat foods should be kept separate at all times. Contamination of ready to eat foods should be prevented using methods outlined in clause 3.5 of this Code.
- b. Fruits and vegetables that are consumed raw should be cleaned and disinfected using a chemical disinfectant or any other process approved by the Food safety Department.

3.2.6 Handling of Chilled and Frozen Food

- a. Food establishments shall meet the provisions of clause 3.4 of this Code during receiving, storage and preparation of frozen and chilled foods.
- b. Provisions of clause 3.3 should be used during preparation and handling of high-risk foods at ambient temperature. It is strongly recommended that areas used for preparation of cold high-risk foods should be maintained at 20°C or below to minimize bacterial multiplication.

3.2.7 Thawing

Frozen foods should be thawed (or defrosted) quickly in a manner that will prevent the rapid growth of pathogenic and spoilage bacteria. During the process of thawing, the microbiological count should not exceed the limits specified in the relevant product standard.

- a. When thawing ready to eat frozen foods, the warmest portion of the food shall not rise above 5°C and the food should be used within 48 hours from the time of start of thawing.

- b. Frozen raw meat, poultry and fish can be thawed under refrigeration at air temperature of 10°C or less, or under cold running water, as long as the product core temperature does not exceed 5°C. Thawed product that is not cooked immediately should be stored below 5°C and must be cooked within 72 hours from the time of the start of thawing.
- c. Frozen raw meat, poultry and fish when cooked immediately after thawing, can be thawed using methods where the thawed portions of the foods are above 5°C. The time period above 5°C, including the time for preparation prior to cooking should not exceed 4 hours. A prior approval from Food Safety Department shall be required for this process.
- d. Raw meat, fish or poultry thawed at a temperature that does not exceed 5°C can be refrozen for specific processes with prior approval of Food Safety Department.

Note: Hazards associated with thawing include cross-contamination from drip and growth of microorganisms on the outside before the inside has thawed. Thawed meat and poultry products should be checked frequently to make sure the thawing process is complete before further processing or the processing time should be increased to take into account the temperature of the meat.

Rationale:

Freezing prevents microbial growth in foods, but will not destroy most microorganisms. Improper thawing provides an opportunity for surviving bacteria to grow to harmful numbers and/or produce toxins. Complete thawing of raw food helps to prevent undercooking.

3.2.8 Cooking Raw Foods of Animal Origin

- a. The time and temperature for cooking raw foods of animal origin and its mixtures should be sufficient to reduce any food borne pathogen to an acceptable level.
- b. Raw foods of animal origin and its mixtures shall be cooked until core temperature is at least 75°C or to a time and temperature that would give a:
 - 6.5 log₁₀ (6.5D) reduction in Salmonella spp. in meat products that contain no poultry;
 - 7.0 log₁₀ (7.0D) reduction in Salmonella spp. in meat products containing poultry

The nature of the product must be taken into consideration when defining the equivalent time and temperature requirements.

- c. Cooking temperature should be checked regularly by inserting a calibrated thermometer into the slowest heating point, normally the core of a product, and the temperature readings should be recorded.

Rationale:

To kill microorganisms, food should be held at a required temperature for specified time. Different species of microorganisms have varying susceptibilities to heat. As well, food characteristics affect the lethality of cooking temperatures. Heat penetrates into different foods at different rates. High fat content in food reduces the effective lethality of heat. High humidity within the cooking vessel and the moisture content of food aid thermal destruction. Heating a large roast too quickly with a high oven temperature may char or dry the outside, creating a layer of insulation that shields the inside from efficient heat penetration. To kill all pathogens in food, cooking should bring all parts of the food up to the required temperatures for the correct duration.

3.2.9 Canning

Low-acid canned foods should be cooked to a temperature of 121°C for a minimum of 3 minutes or subject cans to an equivalent process that would ensure the destruction of spores of *Clostridium Botulinum*.

3.2.10 Heat Treated Non-Ready-to-Eat (NRTE) of Animal Origin

The following requirements are applicable to the products that have been heated to improve the flavour & texture of the product, but the process does not result in a ready-to-eat product. In all cases, the products must be cooked prior to consumption.

- a. The establishment shall have adequate controls in place to minimize all the hazards during the production & processing.
- b. Minimum thermal lethality shall not be required for such products. However, labelling of the product to prevent it from being mistaken for a cooked RTE product must clearly indicate but not limited to:
 - statement or words like "must be cooked", "raw product", "uncooked" or any equivalent word or statement to indicate that the product requires heat treatment or cooking before consumption; and
 - comprehensive instruction of preparation or cooking.
- c. Manufacturer should validate the instruction of preparation or cooking to ensure that process will result in minimum thermal lethality mentioned in clause 3.2.8.

3.2.11 Hot Holding

- a. Cooked foods to be served hot, shall be held at a temperature of 60°C or above.
- b. Appropriate hot holding devices should be used to maintain high-risk foods at the correct temperature.

Note: *Surface cooling of hot food can be controlled by keeping hot food covered as much as possible. To minimize the loss of the organoleptic properties and nutritional quality of the food, it is recommended that food should be kept at or above 60°C for not more than 4 hours.*

Rationale:

No pathogenic bacteria multiply in food that is 60°C or above.

3.2.12 Cooling after Cooking

- a. Cooked high-risk foods intended to be kept under refrigerated storage prior to serving, are to be cooled from 60°C to 20°C or less within two hours and then from 19°C to 5°C or less within 4 hours (total 6 hours).
- b. Foods that are cooled this way and stored chilled should be used within 72 hours from the time of preparation.

Rationale:

Temperatures achieved during cooking should be sufficient to destroy vegetative cells of pathogens; however, some spores are unaffected. In some cases, cooking activates spores which may germinate during subsequent cooling.

Excessive time for cooling of high-risk food is one of the key contributing factors to foodborne illnesses. During extended cooling, foodborne pathogens that may contaminate cooked food or developed from surviving spores may grow to a sufficient number (and / or produce toxins) to cause illnesses. By reducing the cooling time, the risk for pathogenic bacteria to grow to a dangerous level (and / or producing toxin) will be minimized.

If the cooking step prior to cooling is adequate and no recontamination occurs, all but the spore-forming organisms such as *Clostridium Perfringens* should be killed or inactivated. However, under poorly monitored conditions, other pathogens such as *Salmonella* may be reintroduced. Thus, cooling requirements have been based on growth characteristics of organisms that grow rapidly under temperature abuse conditions.

Note: *There are some ways that can help to cool food rapidly: reduce the volume of the food by dividing it into smaller portions and / or placing it in shallow containers; cut large joints of meat and poultry into smaller chunks before cooking; and When cooling equipment is used, ensure there is space around the food containers so that the cold air in the refrigerator or cool room can circulate freely.*

3.2.13 Cooling from Room Temperature

When high-risk foods are prepared at room temperature and kept under refrigerated storage prior to serving, they should be cooled from room temperature to 5°C or less within 4 hours. This includes those foods whose ingredients were canned or made from reconstituted foods.

3.2.14 Reheating Cooked Foods for Hot Holding

Cooked foods that are cooled and stored at 5°C and are intended to be held and served hot should be reheated until it reaches an internal temperature exceeding 75°C in a manner that they will pass through the danger zone (5°C to 60°C) as quickly as possible. Reheating time should not exceed one hour.

Rationale:

Pathogenic bacteria may be present in cooked food due to germination of surviving spores or post-contamination after cooking. These pathogens can grow during cooling and cold storage. Proper reheating provides a major degree of assurance that pathogens will be eliminated. It is especially effective in reducing the numbers of *Clostridium Perfringens* that may grow in meat, poultry or gravy if these products were improperly held. The generation time for *C. Perfringens* is very short at temperatures just below adequate hot holding.

The potential for growth of pathogenic bacteria is greater in reheated foods than in raw foods. This is because spoilage bacteria, which inhibit the growth of pathogens by competition on raw products, are killed during cooking. Subsequent recontamination will allow pathogens to grow without competition if temperature abuse occurs.

It should be noted that reheating cannot make high-risk food safe if it has not been cooled properly or protected from contamination. This is because some pathogenic bacteria (such as *Staphylococcus Aureus*) may continue to multiply and produce heat stable toxins under such circumstances. Reheating such food to 75°C cannot destroy the toxins.

Cooked food that has been reheated should not be cooled and reheated for a second time to avoid it from repeatedly exposed to temperatures that can support the growth of pathogenic bacteria.

3.2.15 Reheating Cooked Food for Immediate Service

- a. Cooked foods that are cooled and stored at 5°C, can be reheated once only and served, if for immediate consumption, at any temperature, provided the time the food spent between 5°C and 60°C does not exceed 2 hours.
- b. Reheated cooked foods should not be re-cooled for further use.

Rationale:

Many foods are at risk during preparation and service. As foods are thawed, cooked, held, served, cooled, and reheated, they pass several times through the temperature danger zone. The duration of time that cooked foods are in the danger zone will have an impact on the safety of the product.

3.2.16 Use of Microwave for Cooking or Reheating

Cooked and cooled food reheated in microwave, should be rotated or stirred throughout or midway during cooking to compensate for uneven distribution of heat, and allowed to stand covered for a minimum of 2 minutes after cooking to obtain temperature equilibrium.

Rationale:

The rapid increase in food temperature resulting from microwave heating does not provide the same cumulative time and temperature relationship necessary for the destruction of microorganisms as do conventional cooking methods.

Since cold spots may exist in food cooking in a microwave oven, it is critical to measure the food temperature at multiple sites when the food is removed from the oven, and then allow the food to stand covered to allow thermal equalisation and exposure.

3.3 Time as a Safety Control

High-risk foods should be stored under temperature control at all times. However, time can be used as a safety measure in the following conditions during exceptional situations where temperature control is not possible. However, food service establishments that routinely hold food before service must use temperature control for safety.

- a. High-risk hot foods that are intended for immediate consumption shall not be stored, displayed or held for service at temperatures between 5°C and 60°C for a period of more than 2 hours. The food product shall be discarded after that time. High-risk cold foods that are intended for immediate consumption shall not be stored, displayed or held for service at temperatures between 5°C and 60°C for a period of more than 4 hours including the time of preparation. The food item should be discarded after that time. After preparation, the food should be quickly chilled to 5°C before it is displayed.
- b. Foods stored without temperature control under section (a) and (b) above should be clearly labelled with the time of expiration to indicate the time when the food has to be discarded.

Rationale:

Food establishment should keep high-risk foods at either 5°C or below, or 60°C or above, during storage, display and transportation. However, it is acceptable for high-risk food to be kept out of temperature control (i.e. between 5°C and 60°C) for a limited time because pathogens (and / or toxin production) need time to grow to an unsafe level. The total time is the sum of the time the food is at temperatures between 5°C and 60°C after it has been cooked (or processed) to make it safe. It does not include the time taken to cool the food after cooking, provided, the food has been rapidly cooled within the required time and temperature.

3.4 Storage, Transportation and Distribution of Food Products

To ensure food safety, storage and transport facilities need to be designed and managed to protect food products from potential contamination, damage, and to prevent the growth of pathogens. Specifications of the Food Code (Section 2) applies to design, layout, construction and maintenance of storage and transportation facilities.

3.4.1 Food Transportation and Distribution

Requirements under this clause that are specific to transportation apply to all kind of food transportation vehicles including containers, trucks, cars and bikes designated for food transportation and delivery.

- a. Food transportation, storage and distribution units should be designed, constructed, maintained and used in a manner that permit effective segregation of different foods and protect food products from being contaminated.
- b. The transportation vehicle should be capable of providing the required temperature under the actual operating environment. To achieve this, :
 - refrigeration equipment must be installed correctly as per the specifications and requirements of the manufacturer
 - refrigeration equipment and the temperature controlled compartment concerned with maintaining and ensuring product quality must be built and operated correctly over all expected ambient conditions
 - refrigeration equipment and temperature controlled compartment must be maintained to achieve the product quality throughout the transportation process
- c. Food transportation equipment that is intended to be in direct contact with food products shall be constructed of materials which is non-toxic, easy to maintain and clean. Examples include stainless steel and food-grade plastic containers.
- d. Food transportation units must be maintained clean at all times. When ready-to-eat foods are transported in food units, the units must be cleaned and disinfected after every use.
- e. Where necessary, cargo containers should be marked 'For Food Only' to ensure that the containers are not for other products. Food transportation and storage units/equipment must be of suitable capacity. During transportation, the food should be stored in a way that allows smooth airflow to ensure sufficient refrigeration.
- f. In transportation, storage and distribution units, foods should be stored off the floor and away from walls. When food is transported in bikes, the food must be stored in sealed containers.

- g. Food transportation vehicles that transport and deliver food in Dubai shall obtain an annual permit for food transportation from Food Vehicle Testing Centres authorised by the Food Safety Department and accredited by the Emirates International Accreditation Centre (EIAC).
- h. The food transportation shall be restricted to the type of food permitted. Non food items shall not be transported in these vehicles.
- i. When transportation vehicles are used for delivery of food and non food items, foods should be stored in separate compartments identified specifically for food. Such compartments shall not be used for transportation of non food items.
- j. Where the food business has contracted a third party supplier of food transportation vehicle, the food business must ensure that the third party meets the requirements of this Code.
- k. Personnel involved in transportation of food, including the drivers shall be trained to an appropriate level of food safety essential to ensure safety of food during transportation.
- l. Food transportation units/equipment must have accurate and reliable temperature monitoring devices that indicate the temperature of the food compartment.
- m. Temperature monitoring devices should be placed in locations where the food is most vulnerable to temperature excursions. All such devices should be calibrated annually or more frequently if required by the manufacturer.
- n. When remote monitoring is used using wireless devices, the food business owner must be able to demonstrate that the temperature monitoring devices are capable of monitoring the temperature accurately. The digital or analogue sensors must be able to capable of monitoring the relevant parameters and communicating the data for decision-making process.

Note: If the hot food is transported in insulated boxes, the food compartment shall not be refrigerated. However, when cold food is transported, it is essential that the transport compartment is refrigerated.

3.4.2 Temperature Control during Storage and Transportation

- a. All high-risk and perishable foods requiring temperature-controlled environments to extend their shelf life or limit microbial growth shall be transported, stored or distributed in equipment that consistently maintains these temperature controls.
 - i. at or below 5°C if cold or at or above 60°C if hot
 - ii. frozen at -18°C if they are intended to be stored frozen.
- b. Areas used for the storage of dry food commodities in warehouses and storage areas in supermarkets and departmental stores must be cool and well ventilated with a relative humidity of 60-65% to ensure that product quality and safety is not compromised. Temperature of storage should meet the requirements of the manufacturer as specified on the product label (for example Infant formula should be stored below 25°C).

- c. In food service facilities such as the restaurants and hotels, dry foods shall be stored below 30°C.

Rationale:

Temperature control is an effective way to prevent microbial growth and product deterioration. Temperature abuse during transportation, storage or distribution increases the potential for foodborne illness. Food starts to deteriorate as soon as the crop is harvested, or the animal is slaughtered. The rate of deterioration is related to the growth of spoilage bacteria and mould. Hence, food should be stored under the right environmental conditions (e.g. suitable temperature, humidity, lighting and atmosphere) to minimize the growth of these micro-organisms and to prevent food from becoming unsafe or unsuitable during the expected shelf- life. Proper storage preserves and prolongs shelf-life of raw food materials and prevents them from contamination by food poisoning bacteria, chemicals and foreign bodies that may finally render the food materials or products unfit for processing or human consumption. Proper storage is one of the essential steps for preventing food from becoming contaminated.

3.4.3 Handling and Transfer of Foods

- a. Food establishment should take necessary steps to inspect foods at the time of receiving to detect and avoid foods that are unacceptable.
- b. Receipt of high-risk foods should be monitored to ensure that proper temperature has been maintained during their transportation, storage and distribution. Products and records should be checked at the time of receiving and nonconforming products should not be accepted.
- c. Food should not be handled or transferred in any way that may cause damage, contamination or adulteration of the food. Food handlers responsible for loading foods into vehicles, and filling display chillers and freezers should be familiar with capacity levels and restrictions to loading such units i.e. volume limits, air flow, temperature range variances etc. in order to maintain the minimum / maximum temperature needs of the products being placed therein.
- d. While transferring chilled foods, foods should be quickly moved into temperature controlled storage to minimize the time in which they are in the danger zone (5°C to 60°C). The surface temperature shall not exceed 10°C during the transfer of chilled foods, and the transfer time shall not exceed 15 minutes.
- e. While receiving and transferring raw frozen foods, the temperature of the food shall not exceed -10°C.
- f. Contaminated or adulterated foods and foods that have been subject to temperature abuse shall be discarded or disposed off.
- g. Damaged food container must be thoroughly examined and if the food is contaminated or adulterated, it shall be discarded or effectively segregated until returned to the supplier or otherwise disposed off.

Rationale:

Careful inspection of transported food will help to minimize the potential of contamination or deterioration of the food product. Prompt handling of foods being transported, stored or distributed serves to minimize the amount of time that perishable foods are in the “danger zone” for growth of pathogenic organisms. Minimizing the amount of handling also minimizes the chance of contamination.

3.4.4 Storage Procedures

- a. Rotation of food stocks in storage areas should occur frequently to ensure that the “first-expiry-first-out” rule is followed
- b. Food should be stored in suitable and safe containers which are covered properly. If packaged, suitability of packaging should be ensured.

Rationale:

Food that is kept for a long time is also likely to become spoiled and attract pest infestation. Effective stock rotation, to ensure that first-come is used first, is essential to avoiding spoilage and preventing pest infestation. In addition, good stock rotation has the advantage of helping to keep the correct levels of

3.4.5 Disposal of Food

Food that has been found or suspected to be unsafe or unsuitable (e.g. food that is subject to recall or has been returned, temperature abused, contaminated or damaged) shall be rejected or identified properly. Such food should be kept in a separate container or in an isolated area and marked as “Damaged / Not for use”. It should be disposed off as quickly as possible & shall never be used for human consumption. Details of rejected items shall be documented & communicated to supplier.

Rationale:

Food intended for disposal should be kept separate so that it is not accidentally sold or used.

3.5 Preventing Food and Ingredient Contamination**3.5.1 Preventing Microbial Contamination**

- a. Food manufacturing establishment should identify and implement segregation (zoning) plan in areas where potential for microbiological cross-contamination exists (airborne or from traffic patterns)
- b. Food manufacturing establishment should conduct a hazard assessment and implement control measures suitable for these areas which includes but is not limited to:
 - structural physical segregation
 - separation of raw from ready to eat (RTE) or finished products
 - access controls with requirements to change into required work wear
 - control on flow of people, materials, equipment and tools

- air pressure differentials.
- c. Access to food preparation areas should be restricted, as much as practically possible, to designated people.
- d. For visitors including management and maintenance staff, all practicable measures should be taken to ensure that they will not contaminate food when visiting food preparation areas.
- e. Where the public has access to food other than raw, unprocessed fruit and vegetables, or food specifically served to a customer by a worker of the food establishment, the food should be protected from public handling and contamination by the use of packaging, display cases, or salad bar sneeze guards (food guards), and be provided with suitable utensils or effective dispensing methods.
- f. Food handlers should avoid contact with exposed areas of ready-to-eat foods with their bare hands and use, as much as practically possible, disposable gloves and clean and disinfected utensils such as tongs, spatulas, or other food dispensing apparatus.
- g. Raw or unprocessed food should be kept separate from ready-to-eat foods.
- h. Ready-to eat foods should not be stored below raw animal products or vegetables.
- i. During thawing, drips from thawing food should be prevented from contaminating other foods.
- j. Raw fruits and vegetables should be, thoroughly washed in potable water to remove soil and other contaminants, disinfected when necessary, before being cut combined with other ingredients, cooked, served, or offered for human consumption in ready-to-eat form. This does not apply to whole raw fruits and vegetables that are intended for washing by the consumer following point of sale.
- k. Cleaning and disinfection of food contact surfaces between uses should be carried out as described in Section 4 of this Code. Food should not come into contact with surfaces of utensils and equipment that have not been cleaned and disinfected in accordance with procedures described in this Code.
- l. When workers need to taste the food, only cleaned and disinfected utensils should be used, and the utensils should be immediately cleaned and disinfected after tasting and prior to tasting another food or the same food.
- m. Foods that have been previously purchased and returned due to quality or food safety issue to the retailer or food service operation may not be re-offered for sale to another consumer.
- n. Separately marked or color Coded cutting boards should be used for the preparation of:
 - i. ready to eat foods
 - ii. raw, ready to eat animal and sea food (e.g. Fish for Sushi);
 - iii. raw vegetable foods intended to be cooked;
 - iv. raw animal foods intended for cooking.

- o. Separate, freshly cleaned and disinfected food contact surfaces (including preparation tables, cutting boards and knives) should be used for ready-to-eat foods.
- p. Equipment with any raw food contamination should never be used for ready to eat food without being cleaned and disinfected.
- q. Food transported in conveyors, elevators or similar means should be protected from contamination.

Rationale:

The food industry faces the threat that the food it serves may endanger workers or customers. Microbes are everywhere. Pathogenic microorganisms pose the greatest danger causing foodborne illnesses. Good policies and procedures for preventing microbial contamination serve as barriers to these disease-causing organisms.

3.5.2 Physical and Chemical Contamination

- a. The operator of a food establishment should ensure that food is stored, displayed, prepared and served in a manner that prevents the food from becoming contaminated.
- b. Non-food items such as chemicals, pesticides or any other substance that can harm consumers must be stored in designated areas away from any food, food equipment or food contact surfaces.
- c. Foods should not contain unapproved food additives or food additives in excess of the amounts stipulated under relevant food standards.
- d. In large food storage facilities where fumigation processes are used to protect the food, all necessary precautions must be taken to ensure that
 - i. Fumigants are safe to use on food and are approved by the authorised regulatory agency
 - ii. Fumigants are used as per the recommended dose
 - iii. All precautions are taken to ensure that personnel involved in carrying out the fumigation as well as the people who work in that area are adequately protected during and after the fumigation process.

3.6 Control of Allergens

Operational standards of the food establishment shall consider protection of consumers with food allergies, intolerances and autoimmune diseases. Food establishments shall integrate allergen management as a part of the food safety management system and should consider the risk from food allergens together with other food safety risks.

3.6.1 General Requirements for Allergen Management

- a. All food establishments shall implement an allergen management system.

- b. Food establishments must declare the 12 most common ingredients known to cause allergenic reactions when they are present in the food that is prepared or sold in the establishment.
- c. The following ingredients are contained in food—whether as an ingredient, compound ingredient, food additive or processing aid—they must be declared on the label or the menu, no matter how small the amount:
- crustaceans and their products (e.g. prawns)
 - peanuts and their products
 - soybeans and their products
 - tree nuts and their products (almonds, hazelnut, walnut, macademia, pecan, pistachio etc)
 - sesame seeds and their products
 - fish and fish products
 - egg and egg products
 - milk and milk products
 - gluten and cereals containing gluten (wheat, rye, oats, barley and spelt)
 - celery and their products
 - mustard and their products
 - sulphur dioxide and sulphites
- d. For the product labels on packaged food produced or imported to Dubai where federal or GCC standards are applicable, declaration of allergens can be limited to the ingredients provided in the relevant food standards.

Note: Over 250 foods have been identified as possible allergens. While it is not possible to identify all those foods as potential hazards, food service businesses should carryout an internal risk assessment process as a part of their food safety management systems and identify any specific allergens that might be applicable to a certain clientele. For instance, identification of lupin and molluscs as allergens in a restaurant that serves to consumers from European Union where these ingredients are labelled as allergens.

3.6.2 Management of Allergens

- a. Food establishments shall conduct an assessment of raw materials to establish the presence and likelihood of contamination by allergens listed under Section 3.6.1. This assessment should include but not be limited to the review of raw material specifications and, where necessary, acquire additional information from suppliers through questionnaire or supplier

audit to verify the allergen status of the raw material, its ingredients and the production facility.

- b. The establishment shall identify and list allergen-containing materials handled on site. This list shall include all the allergen containing raw materials, intermediate, finished and newly developed products.
- c. Food establishment where a certified food safety management system is mandatory, the establishment shall carry out a risk assessment to identify routes of allergens and establish documented policies and procedures for handling raw materials, intermediate and finished products to ensure cross-contact is avoided. This should include:
 - i. identification of the scope of the program.
 - ii. consideration of the physical state of the allergenic material (i.e. powder, liquid, particulate).
 - iii. systematic identification of probable areas or steps of cross-contact throughout the process flow.
 - iv. assessment of identified risk at each process step.
 - v. identification and implementation of suitable controls to reduce or eliminate the risk of cross-contact.
 - vi. establish and implement systematic monitoring of those controls.
 - vii. establish appropriate corrective action when monitoring indicates that control is breached.
 - viii. regularly review the program to ensure that the measures outlined above are working effectively.
- d. Procedures or controls implemented by the establishment to ensure the effective management of allergenic material to prevent cross-contact into non allergen products shall include but not be limited to:
 - i. physical or any other appropriate control during storage, processing and packing.
 - ii. the use of separate or additional protective clothing when handling allergenic materials.
 - iii. the use of good hygiene practices like hand washing, cleaning of food contact surfaces etc. when handling allergenic materials.
 - iv. use of identified, dedicated equipment and utensils for processing
 - v. identify specific and labelled areas to store equipment and utensils used for processing allergen free foods
 - vi. scheduling of production to reduce changes between products containing an allergen and products not containing the allergen.
 - vii. systems to restrict the movement of airborne dust containing allergenic material.
 - viii. waste handling and spillage controls.

- ix. restrictions on food brought onto site by staff, visitors, contractors and for catering purposes.
- e. Procedures shall be in place to avoid contamination during rework.
- f. The establishment shall fully validate and routinely verify the production process, in case the claim is made regarding an allergen in food.
- g. Equipment or area cleaning procedures shall be designed to remove or reduce to acceptable levels any potential cross-contamination by allergens. The cleaning methods shall be validated to ensure they are effective, and the effectiveness of the procedure routinely verified. Cleaning equipment used to clean allergenic materials shall either be identifiable and specific for allergen use, single use, or effectively cleaned after use.
- h. The establishment shall have appropriate internal and external communication related to allergen management. This includes but is not limited to information related to primary and secondary ingredients, change in procurement, recipes, packaging, preparation or production procedures, equipment, layout and staff.
- i. Establish documents and records that are appropriate for the nature and size of the food establishment to demonstrate the effective application of the above-mentioned requirements.

3.6.3 Labelling of food with allergens

Food containing any ingredient or derived from a substance or product listed in clause 3.6.1 shall meet the following requirements:

- a. If foods containing allergen are packaged or re-packaged, the food establishment must list the presence of these allergen with its type in the ingredient list in bold font. This shall be easily visible, clearly legible and not obscured in any way or "Contains" followed by the name of the food source from which the major food allergen is derived, immediately after or adjacent to the list of ingredients, in type size that is no smaller than the type size used for the list of ingredients
- b. Modification of any recipe with an any known allergen ingredient, the food establishment shall clearly declare on the pack with suitable warning like New recipe or Now contains, in addition to the amended ingredients list.

3.6.4 Providing allergen information to non-packaged food

The following allergen labelling regulations apply to food sold in retail and food service establishments.

- a. When food is sold to the customers directly, for example in a restaurant or cafe, the establishment must provide allergen information in writing. This could be either:

- i. full allergen information on a menu, digital devices or boards
 - ii. a written notice placed in a clearly visible position explaining how customers can obtain this information - for example by speaking to a member of staff
 - iii. Use allergy and intolerance icons to tell your customers how they can find out allergy information.
- b. If food is offered on a buffet, allergen information for each food item should be provided separately. Measures should be in place to facilitate consumers with severe allergy to consume food prior to other customers thus reducing the risk of contamination.
 - c. If food is sold through online platforms or provided up on phone order for a takeaway, allergen information must be provided before the purchase of the food is completed - this could be in writing (for example on a website, catalogue or menu) or orally (for example by phone)
 - d. All service staff should be formally trained on procedures and policies regarding management of allergens prior to start of work. Service staff should:
 - be trained and required to ask the customer about potential allergies before taking an order in person, or on phone
 - be trained on handling allergy information requests and when relevant, be able to guarantee that allergen-free meals are served to the right customers.
 - e. Food handlers should know the risks of allergen cross-contact when handling and preparing foods and how to prevent cross-contact.
 - f. Where the nature of the production and preparation process is such that cross-contact from an allergen cannot be prevented, a warning shall be included on the label and/or food menu.

3.6.5 Precautionary allergen labelling

If there is a risk of a food product being affected by allergen cross-contact, the label should include one of the following statements:

- may contain **X** *
- not suitable for someone with **X** * allergy

** Name of ingredient*

Precautionary allergen labelling should only be used after a thorough risk assessment. It should only be used if the risk of allergen cross-contact is real and cannot be removed.

3.6.6 Free-from Allergen Claims

Strict controls are required for ingredients, handling and preparation when foods are sold with 'free from' claims. If the label or declaration in any format indicate or suggest that the product is free from a particular allergen, this declaration has to be based on specific and rigorous controls needed to ensure that the produce is completely free from the particular allergen. This should include verification of ingredients and packaging materials and prevention of cross-contact.

Note: Free-from claim is a guarantee that the food is suitable for all with an allergy, intolerance or an autoimmune disease. Exceptions for the lower limit of a particular allergen is applicable to foods when lower limits are specified by food standards applicable in UAE.

3.7 Packaging

Food packaging should be of suitable design to provide the necessary protection to the product during its shelf life. Both packaging and wrapping of food should be carried out by staff with appropriate training in food safety & these activities should be carried out under hygienic conditions to protect the food from risks of contamination.

3.7.1 General Requirements for Packaging Materials

- a. Packaging materials should be appropriate for the food to be packed and sufficiently durable to withstand the conditions of processing, storage and transportation.
- b. Packaging materials should not pose a threat to the safety of the food to be packed.
- c. Packaging materials and design should provide adequate protection for the food to be packed to minimize contamination and prevent damage.
- d. Reusable packaging materials should be durable, so that it can withstand cleaning and/or disinfection process.
- e. Packaging materials should be stored and handled under hygienic conditions to minimize the risks of contamination and deterioration.

Rationale:

In addition to prolonging shelf-life, retaining quality and nutritional values as well as providing a water vapour / gas barrier, packaging is important for preventing food from being contaminated with chemicals, physical matters and bacteria.

Packaging materials should not endanger the safety and suitability of the food in contact with them. They should be suitable for the food to be packed, non-toxic, durable and clean. Chemicals from packaging materials should not migrate into the food; and if migration occurs, there should be no known toxic effects to consumers.

Packaging materials may contaminate food if they are not clean. They should thus be kept in their original packages and stored in clean areas where they are not exposed to risks of contamination.

3.7.2 Protection of Food Content

Food packages should be in good condition and protect the integrity of the contents so that the food is not exposed to adulteration, damage or potentially harmful contaminants.

3.7.3 Food Containers

- a. The operator of a food establishment should ensure that only food grade containers are used.
- b. Acidic foods (pH below 5) should not be stored or cooked in containers coated with, made of, or containing:
 - i. lead or lead-based products, including lead-glazed ceramics, china wares, crystal or pewter;
 - ii. zinc, such as galvanized containers;
 - iii. enamel ware, which may chip and expose the underlying metal;
 - iv. copper and copper alloys such as brass;
 - v. cast iron; and
 - vi. Aluminium.
- c. Cast iron may be used only under the following conditions:
 - i. as a surface for cooking
 - ii. in utensils for serving food, if the utensils are used only as part of an uninterrupted process from cooking through service.

3.7.4 Returnable and Cleaning-for-Refilling

- a. Except as specified in (b), returned empty containers intended for cleaning and refilling with food, should be cleaned, disinfected and refilled only in a regulated food processing plant.
- b. Food specific containers for beverages only can be refilled in a food establishment, if:
 - i. the beverage is not a high-risk food;
 - ii. the design of the container, the rinsing described in (iii), and the nature of the beverage, when considered together, allow effective cleaning of the container;
 - iii. facilities for rinsing the containers with potable hot water under pressure are part of the dispensing system.

Rationale:

Separating food from non-food items by creating designated storage areas will ensure that accidental contamination from foreign matter (dirt, broken glass and crockery, and other objects) and toxic chemicals (cleaning agents, disinfectants, sanitizers, detergents, pesticides) will be minimized.

Chemical contamination can occur during cooking or storage when certain metals contact high-acid foods. Potentially toxic metals include lead, copper, brass, zinc coating, antimony, and cadmium. Some foods that have been involved in metal poisoning are sauerkraut, tomatoes, fruit gelatin, lemonade, fruit punches, and carbonated beverages.

Damaged or incorrectly applied packaging may allow the entry of foreign matter or other contaminants into the food. Canned foods should be closely inspected for imperfections or damage, such as punctures, bulging or seam defects.

3.8 Safety of egg and egg-based products

- a. Importers of eggs shall ensure that eggs are sourced from suppliers who can provide evidence of microbiological safety specific to *Salmonella* Spp.
- b. When whole eggs are purchased in bulk (non-branded), the food establishment shall obtain all relevant information from the supplier about the source of the eggs including the country of origin, production and expiry dates and details of transportation & handling.
- c. When eggs are sourced from farms in UAE, the egg trader or supplier must ensure that the country name and farm code are printed on the eggs.
- d. When eggs are imported, the importer should ensure that the eggs have the country of origin printed on the eggs. When the country code is not printed, the importer and traders of egg must ensure that the packaging provided to the food establishments as well as the consumers have clear information about the country of origin of eggs.
- e. If the packaging states 'Packed in UAE,' there should be clear information provided to the buyer about the country of origin in addition to the 'packed in' information.
- f. Shell eggs as well as egg products shall be stored refrigerated at a temperature of 5°C or less.
- g. When several eggs are pooled, the pooled eggs must be prepared in small batches of less than 100 eggs, stored at 5°C, and heat processed within two hours.
- h. In food service businesses where raw or lightly cooked eggs are served to consumers upon their request, the food establishment shall take reasonable measures to ensure that the consumer is informed about the increased risk of foodborne illness. The menu or the display label at the buffet in such cases should have a clear consumer advisory in Arabic and English stating "Consumption of raw or undercooked eggs may increase your risk of food-borne illness. Written further information is available upon request."
- i. Pasteurized egg must be used when the consumer is not aware that the food that is served to them contains raw or undercooked eggs.

*Note: Food establishment shall use safer alternatives to raw eggs in foods which are not fully cooked such as garlic paste, chocolate mousse, tiramisu etc. Eggs are sometimes contaminated with the bacteria *Salmonella Enteritidis* that can easily survive light cooking methods. When several eggs are combined or pooled, one contaminated egg can contaminate the whole batch of eggs, particularly if the eggs are held at ambient temperature for a long time during the pooling or cooking process. Storage at ambient temperature leads to proliferation of *Salmonella* and this increases the risk of foodborne illness significantly. If eggs are pooled for scrambling, for batter etc, the pooled eggs must be used within a short time.*

It is the responsibility of the PIC of the food establishment to ensure that the consumer is fully aware of the product and the ingredients so that he or she can make informed decisions.

3.9 Specialized Processing Methods

- a. Specialized processing methods often require specific equipment and/or ingredients. Because of an increased potential health risk, specialized processes in food establishments must be conducted under strict operational control procedures.
- b. Establishment using Specialized Processing Methods shall prepare a HACCP Plan for each individual product/process according to the requirements of clause 3.10.1(c).

3.9.1 Slow Heat Treated Ready-to-Eat (RTE) Foods of Animal Origin

The establishment processing ready-to-eat foods of animal origin using slow heat treatment shall meet all the requirements of clause 3.2 to 3.4.

3.9.2 Raw Ready to Eat Foods of Animal Origin

Where poultry, animal or sea food is served raw or lightly cooked or, when such foods are used as an ingredient in a food that is not heat processed to ensure safety (such as sushi, oysters, steak tartar, carpaccio, steaks and burgers, raw kibbeh, desserts made from raw or lightly cooked eggs etc.), the following measures should be taken:

- a. Ensure that the food is not served to vulnerable population groups such as pregnant women, infants, children under the age of 15, and people with specific health conditions.
- b. When it is not obvious to the consumer from the name or ingredient that the food or the ingredient is raw, the menu or the label on the packaging should clearly state the name of the ingredient, and state that the ingredient is raw.
- c. When served to consumers upon their request, the food establishment shall take reasonable measures to ensure that the consumer is informed about the increased risk of foodborne illness. The menu or the display label at the buffet in such cases should have a clear consumer advisory in Arabic and English stating “Consumption of raw or undercooked animal, seafood or poultry products such as eggs may increase your risk of food-borne illness. Written further information is available upon request.”
- d. When packed and sold, the packaging should clearly state the storage and handling requirements necessary to ensure safety of the food.
- e. When fish associated with parasitic infection is served raw or the cooking process does not meet the minimum thermal lethality requirements, the establishment should have additional controls that includes:

- i. Freezing of fish to eliminate parasites or any other control measures to ensure the elimination of such hazards. When freezing is use for parasite control, fish shall be blast frozen at –35°C for 15 hours, or –20°C for 7 days to eliminate parasites.
 - ii. If the fish are frozen by a supplier, a written agreement or statement from the supplier stipulating that the fish supplied are frozen to a temperature and for a time specified section (i) of this clause.
 - iii. Freezing is not a mandatory control measure for molluscan shellfish, scallop products consisting only of the shucked adductor muscle, certain species of tuna e.g. Thunnus alalunga, Thunnus albacares (Yellowfin tuna), Thunnus atlanticus, Thunnus maccoyii (Bluefin tuna, Southern), Thunnus obesus (Bigeye tuna), or Thunnus thynnus (Bluefin tuna, Northern); or aqua-cultured fish such as salmon raised under controlled conditions.
 - iv. When freezing is not used as a control measure, food establishments that import distribute, store or serve raw seafood must ensure that the product is ‘sushi or sashimi grade’ with supporting documents from the supplier assuring the safety of the fish.
- f. When raw or partially cooked whole-muscle intact beef is served in a Ready to Eat form the food establishment shall:
 - i. provide any evidence that the whole muscle beef is not injected, mechanically tenderized, reconstructed, or scored and marinated
 - ii. Cook all sides of the steak to a surface temperature mentioned in Clause 3.2.8
 - iii. provide information to consumers in such a way as to enable them to understand its importance and make informed choices.

3.9.3 Sous-vide Process

Establishment processing food with sous-vide method shall meet all the requirements of clause 3.2 to 3.4 as well as:

- i. Use commercial equipment with adequate heating capacity and effective temperature control necessary to ensure the time and temperature combinations that are necessary for getting the necessary reduction in pathogenic organisms are achieved. The reduction requirements for animal foods must be equivalent to the cooking requirements specified in this Code.
- ii. Use a food grade oxygen barrier bags for cooking
- iii. Sous-vide pasteurized foods must be used within 3 days of refrigerated storage at or below 5°C.

- iv. Such food shall be prepared and consumed at the establishment with no distribution or sale of the packaged product.

3.9.4 Reduced Oxygen Packing

Food establishments that package high-risk foods using a reduced oxygen packaging method shall have adequate measures in place to control the growth and toxin formation of both anaerobic & aerobic pathogenic bacteria.

Packaging materials or atmospheric packaging gases, where used:

- i. should not cause harm to people exposed to them;
- ii. should not pose a threat to the safety and suitability of food under the specified conditions of storage and use.

3.9.5 Water activity and acid ingredients to control growth of pathogens

Air drying, application of heat, salts, or freeze drying or combination of these processes can be used to reduce the water activity (aw) of the product to inhibit the growth of microorganisms.

- a. Food establishment that dehydrates & dry beef or beef products shall cook such products to achieve minimum thermal lethality mentioned in 3.2.8. The temperature and the humidity in the drying chamber/room shall be uniform and controlled. Establishment shall use accurate measurement devices to measure the humidity, temperature & water activity (aw) of the product.
- b. Salting and curing processes reduce the water activity of the products and all the additives used in these processes shall not exceed the exceed the GSO standard limits.
- c. When pH is used as a control measure for foods stored at ambient temperature, the pH of the food shall be less than 4.0 with the exception of sushi rice where a pH of 4.6 is acceptable for control of *Bacillus cereus* in rice.

3.9.6 Smoking and Aging

- a. These traditional processes improve the flavor and tenderness of beef. The establishment shall use proper time, humidity and temperature control to avoid the growth of mould and spoilage bacteria.
- b. Aged product shall be heat treated before consumption, to achieve the minimum thermal lethality requirements of the clause 3.2.8.
- c. Smoked products shall meet all the requirements of Clause 3.2 to 3.4.

3.10 Variance plan

- a. The Food establishment shall obtain a variance approval from the Food Safety Department for modifying or waiving any of the requirements of this code. Variance plan are acceptable under exceptional circumstances, or when there is a valid reason to not to follow the recommendation of the code or to seek alternative measures without compromising the food safety objective.
- b. Food establishments that require a variance plan must have a food safety management system and shall document and retain the approved variance plans as a part of their food safety management system.
- c. The establishment requesting variance plan approval from the department shall document the following:
 - i. Scope of the variance plan and the relevant clause of the Food Code where the proposed variance required
 - ii. How the identified food safety hazards in the relevant clause of the code will be controlled by the proposed variance plan without compromising the food safety objectives.
 - iii. A HACCP plan of product or process with the list of ingredients, process steps, control measures and any other relevant information and appropriate documentation.
 - iv. Regular review of the plan by the food establishment to ensure its adequacy
- d. The food establishment shall obtain a variance approval from the Food Safety Department for following processes but is not limited to:
 - i. Sous-vide processes and slow heated heat treatment processes for foods of animal origin
 - ii. Preparation and sale of raw ready to eat or partially cooked foods of animal origin
 - iii. Smoking and curing (as a method of food preservation rather than as a method of flavor enhancement)
 - iv. Reduced Oxygen Packaging (ROP) include vacuum packaging sous vide, or cook-chill except where the growth of and toxin formation of bacteria are controlled as specified in clause
 - v. Acidification, fermentation or adding components or additives to render a product shelf stable
 - vi. Preparing food by another method that is determined by the Food safety department to require a variance.
- e. Food that is packaged using a Reduced Oxygen Packaging (ROP) method and is maintained at 5°C or less shall meet at least one of the following criteria for exemption from variance requirement. Establishment shall prepare a HACCP Plan for all such product/process in accordance with all the requirements of (c) of this clause.
 - i. Food that have a water activity of 0.91 or less
 - ii. Food that have a pH of less than 4.0
 - iii. Fish that is frozen before, during, and after packaging using a ROP method
 - iv. Unpackaged juice prepared on the premises in a food Establishment for service or sale that serves a highly Susceptible Population.

3.11 Storage or Display of Food in Contact with Water or Ice

Ice produced in factories in bulk or in ice machines shall be produced, stored and transported in a safe manner. Following general requirements apply to ice produced for human consumption.

- a. Ice which comes into contact with food has to be made from potable water.
- b. Source of the water used for the production as well as the ice should meet the standards- UAE.S GSO 384/ 1994 (ice for human consumption) and GSO 149/ 2000 (Unbottled Drinking Water).
- c. Food establishments shall conduct microbiological and chemical analysis of ice periodically to ensure that ice meets the relevant microbiological and chemical standards. Samples should be tested in an EIAC accredited laboratory.
- d. The number or samples tested, and the frequency of testing should be representative of the nature and volume of production. Food establishments shall establish the such verification programs as a part of the food safety management system in consultation with the authorized officer at the Food Safety Department.
- e. Ice should be made, handled and stored under conditions that protect it from contamination.
- f. Ice shall not be used as food, if it has been used previously as a medium for cooling the exterior surfaces of food. .

4. Cleaning and Maintenance

Establishment cleaning and maintenance includes the elements of cleaning and disinfection, pest management, waste management, building and equipment maintenance and the need to monitor the effectiveness of these elements. Food establishments should ensure that premises, fixtures, equipment and utensils are maintained to an acceptable standard of cleanliness, and in a good state of repair.

Rationale:

Buildings, materials, utensils and equipment in a food establishment, including waste water and refuse collection systems pose a potential source of contamination of food and food products. These areas should be kept clean, free of pests and maintained in good repair.

Equipment, materials and utensils that come into contact with foods, especially raw products (fish, meat, vegetables, and poultry) are generally considered to be contaminated by microorganisms. These microorganisms could contaminate other products. For this reason, it is necessary to have well established programs in place to ensure that physical structures, including equipment and utensils, are maintained in a clean and sanitary condition. In order to achieve thorough disinfection, equipment may require dismantling, cleaning and disinfection at the end of each day or more frequently to prevent microbiological proliferation.

4.1 General Requirements Pertaining to Maintenance

- a. All parts of the establishment, fixtures, fittings and equipment should be maintained at all times in a state of good repair and working condition to:
 - i. prevent contamination of food by plaster, paint, broken glass or leaking pipes, etc.
 - ii. enable effective cleaning and, if necessary, disinfection
 - iii. ensure pests cannot gain access to the establishment from hollow spaces in ceilings, walls, etc.
 - iv. ensure that the equipment works as intended.
- b. Food establishment shall have a preventive maintenance plan for all devices used to monitor or/and control food safety hazards.
- c. Preventive maintenance shall be carried out in such a way that production on adjoining area or equipment is not at risk of contamination.
- d. Food establishment shall ensure that all maintenance staff have been trained in the food safety hazards associated with the maintenance activities.
- e. Floor surfaces should be maintained in good condition, free of cracks, crevices or other defects. There should be no dips or hollows. Floors should be free from accumulation of food waste, dirt, grease or other visible obnoxious matter. They should be washed with detergents at least once daily. Hot water or steam may be used for better removal of grease. Coving between floor and wall junctions should be kept clean, in good repair and be bonded firmly to their positions.
- f. Walls of food rooms should be cleaned frequently, daily or more if necessary. Wall surfaces or ceilings should be clear of unnecessary fittings or decorations such as unnecessary posters or pictures as far as possible.

- g. Junctions between walls, and between walls and ceilings, should be tightly sealed and maintained in good condition, and free from cracks, crevices, holes or gaps or flaking materials. Any holes or gaps that may allow access of pests to wall and ceiling cavities should be sealed up. False ceilings should be cleaned to remove accumulation of dust, particles or debris that may fall on to foods as to cause contamination.
- h. Any furniture or equipment, which cannot be moved easily, should not be placed too near to wall inside kitchens or food preparation rooms as to obstruct access to such places for cleaning. Alternatively, heavy equipment should be installed with wheels to facilitate easy removal for cleaning.
- i. Food contact surfaces of equipment and utensils shall be maintained in a good state of repair. They should be smooth, free of cracks and crevices, and be kept clean and free from noxious matter.
- j. Cutting surfaces such as chopping blocks and cutting boards which are subject to scratching and scoring should be resurfaced if they become too difficult to be effectively cleaned and disinfected and should be discarded if resurfacing is impossible.
- k. Non-food contact surfaces of equipment such as cupboards, refrigerators, racks, stoves, cooking ranges and food lifts should be kept clean and in good state of repair and working condition. They should be free of unnecessary ledges, projections and crevices; and designed and constructed to allow easy cleaning and to facilitate maintenance.

4.2 Cleaning and Disinfection

4.2.1 General Requirements Pertaining to Cleaning

- a. Food contact surfaces of equipment and utensils should be kept clean and free from noxious matter by regular cleaning and disinfection at a frequency that prevents accumulation of grease deposits, dirt and other residues.
- b. A food contact surface such as a cutting board used for raw food and ready-to-eat food shall be cleaned and disinfected between each use. If equipment or a utensil is used continuously at room temperature for handling high-risk foods (e.g. meat slicers), it should be cleaned and disinfected at least once every 4 hours.
- c. Any part of a thermometer, especially the temperature probe that will be inserted into the food for temperature measurement, should be cleaned and disinfected between use.
- d. Non-food contact surfaces should be cleaned at a frequency that prevents accumulation of dirt, grease and other residues.
- e. Cleaning has to be carried out in a systematic manner, for example, high-risk area to low risk area with sequence from walls, non-food contact surfaces of equipment such as cupboards, refrigerators, cooking ranges and then the floors.

4.2.2 Cleaning Facilities

Food establishments should have adequate facilities to enable effective cleaning activities. There should be separate cleaning rooms with proper segregation between clean and dirty equipment to prevent cross-contamination.

Rationale:

Accumulation of food waste, dirt and grease, etc. provides food for pests and enables microbial growth, which are conducive to food contamination. This dirt and waste may come from a variety of sources including food spills, food handlers' shoes, linens and food packaging, etc. Accumulation of liquid on floors could provide a water source for pests and encourage their presence in the establishment. It could also be a source of microbial contamination. Cracks, crevices or similar defects on walls, floors or ceilings can harbour pests or become their breeding grounds. Effective, frequent and regular cleaning, disinfection/sanitizing, and maintenance of floors, walls, ceilings and equipment are thus necessary for removal of food contaminants and prevention of microbial proliferation

4.2.3 Cleaning and Disinfection Process

- a. Cleaning and disinfection of equipment and utensils should be done as separate processes. A food contact surface needs to be thoroughly cleaned before it is disinfected.
- b. After cleaning, food contact surfaces, equipment and utensils shall be:
 - i. disinfected to a temperature of 82°C or equivalent in a dish washing machine; where the washing machine shall be equipped with a temperature measuring device that indicates the temperature of the water in each wash and rinse tank
 - ii. disinfected by immersing in a non-toxic solution containing a disinfecting agent of a type approved by the concerned department or
 - iii. disinfected using any other method that can reduce the microorganisms to a level which is neither harmful to health nor the quality and safety of foods.
- c. All cleaned and disinfected equipment and utensils should be thoroughly rinsed and dried by evaporation (air dry).
- d. Cleaned and disinfected equipment should be stored in a place and manner that prevents contamination.
- e. Adequate care must be taken to ensure that water, debris and other materials are not spread to clean areas when high pressure jets are used.
- f. In retail food service establishments:
 - i. separate sinks should be provided for food preparation and equipment washing depending on the size and extent of activities
 - ii. all dish-washing activities should be done in sinks and/or dish washers within the food establishment
 - iii. wash-up sinks should be cleaned at a frequency that prevents accumulation of grease deposits and other residues

- iv. sinks used for the purpose of washing ready-to-eat foods should be cleaned and disinfected before use
- v. wash-up sinks should not be used for miscellaneous articles
- vi. hand washing should not be carried out in sinks that are used for other purposes. Sinks should be identified by a suitable signage.

Rationale:

Cleaning is a process for the removal of contaminants such as food residues, dirt, grease and bacterial film from a surface, which is achieved by the use of water and proper detergent. Utensils and equipment should be disinfected, either mechanical or manually, after cleaning to minimize the risk of food becoming contaminated with micro-organisms.

A bactericidal agent or disinfectant should be applied at the proper concentration, temperature and for the appropriate duration of time to achieve desirable reduction in bacterial level.

Disinfected equipment and utensils shall be handled in a sanitary manner after disinfection and should be allowed to dry as quickly as possible as most micro-organisms cannot survive in the absence of water. Drying by towels or storing on a dirty surface may lead to contamination a cleaned and disinfected surface.

4.2.4 Chemicals and Technologies used for Cleaning and Disinfection

The following requirements apply to chemicals and technologies that are used in the food industry for cleaning and disinfection process.

- a. Agents and materials used for cleaning and disinfection, as well as the processes used for cleaning and disinfection must be suitable for use in food establishments and be approved by the concerned department. The establishment should determine the appropriate cleaning method in consultation with the chemical supplier.
- b. Chemicals including detergents, and processes used for cleaning food contact surfaces should be appropriate to effectively remove food residues on equipment and utensils.
- c. The service or solution provider of the cleaning/disinfection agent, or the provider of the equipment or process used for cleaning and disinfection should provide all necessary information to the food industry user.
- d. The service or solution provider of the cleaning or disinfectant agent must provide the essential documents and training required to use the agent or the process safely and effectively. The documents provided by the service or solution provider should include
 - i. evidence that the chemicals are suitable for the tasks being carried out
 - ii. evidence that the chemicals will be effective against pathogens of concern
 - iii. evidence that the chemical is suitable for use in food establishments.
- e. Material Safety Data Sheets (MSDS) along with the documents of validation pertaining to the suitability and effectiveness of the chemical and/or the process of disinfection should be retained in the food establishment at all times.

- f. Effectiveness of the cleaning method should be evaluated by the food establishment and appropriate data should be gathered to validate the method selected and to make adjustments as needed.
- g. Instructions on how to use the agents should always be followed, especially the optimal combination of the temperature, pH and concentration of the agent. If the instructions are not clear, further advice should be sought from the supplier.
- h. All chemicals should be labelled properly and never decanted into food containers.
- i. Chemicals should be stored securely and in accordance with the manufacturer's recommendation.
- j. The concerned person in the establishment should:
 - i. be trained on the use of the disinfectant
 - ii. check the temperatures of the water and the disinfectant concentration frequently to ensure that effective results are being achieved. Test kits/strips should be obtained from the supplier and stored at convenient location
 - iii. keep records of disinfectant concentrations.

Note: 'Technologies' refer to disinfection techniques without direct application of a cleaning or disinfecting agent.

4.2.5 Cleaning Tools and Equipment

The design of the cleaning tools and their handling and storage are also important to ensure effective cleaning.

- a. The design of the cleaning tools must be suitable for effective cleaning with no hiding places for food residues or bacteria to accumulate.
- b. Materials should be suitable to withstand the effect of cleaning chemicals.
- c. Brushes made of wood and natural bristles must be avoided and worn out brushes must be replaced.
- d. Mops with detachable heads that can be washed should be used for cleaning the floor.
- e. When high-risk food production areas are very close to potentially contaminated raw food areas such as butchery, produce cleaning area etc., tools should be color coded to restrict the use of tools of a certain color to a specific area.
- f. Cleaning tools should be stored clean and dry after use in designated areas that facilitates drying.
- g. Equipment such as floor scrubbers and rotating washers should be carefully chosen for the intended use.

4.2.6 Cleaning and Disinfection Program

- a. To achieve the appropriate standard of cleanliness, all food establishments should develop a cleaning / disinfection Program that encompasses all equipment and facilities as well as general environmental cleaning. Cleaning schedule need to be developed that are suitable for the item/ equipment/surface to be cleaned and should describe both the method and frequency of cleaning specific areas.
- b. Food establishments should conduct an evaluation of each area to decide the cleaning method. Consideration should be given to potential microbiological risks, i.e. pathogenic and spoilage microorganisms, and potential chemical and allergen risks.
- c. Cleaning Programs should be maintained with the due consideration to the following details:
 - i. the size, type and temperature of the area to be cleaned, the structure of the building and the wall, floor and ceiling finishes and the type of material
 - ii. the type of soiling and water hardness, water pressure and drainage system
 - iii. if cleaning is necessary during food preparation, adequate measures to remove or protect food;
 - iv. measures to reduce the risk of spreading contamination, especially when using high pressure jets.
- d. Food establishments should maintain a written cleaning schedule that specifies:
 - i. what is to be cleaned
 - ii. chemicals, materials and equipment to be used for cleaning
 - iii. iii dilution and contact time of the chemical
 - iv. method of cleaning (how)
 - v. v frequency of cleaning (when and how often)
 - vi. time necessary to clean it
 - vii. who has to clean it (name of the person)
 - viii. safety precaution to be taken- protective clothing to be worn
 - ix. who is responsible for monitoring and recording what has been cleaned?.

Rationale:

The requirement for a written cleaning & disinfection program is very similar to the requirement, in this Code, for management principles to control food hazards. The objective of the disinfection program is to provide reasonable assurance that the food establishment is being cleaned and disinfected effectively and consistently.

4.3 Pest Management

- a. Food establishment should be kept free of food pests including rodents, insects, birds and animals.

- b. Food establishment and surrounding areas should be inspected regularly to look for signs of pest infestation.
- c. Whenever pests are detected, control actions should be taken promptly to rectify the situation.
- d. Pest control activities shall be done by a specialist licensed pest control agency approved by concerned department of Dubai Municipality and should only use approved chemicals and methods.

Rationale:

Food establishment are easily infested by pests due to the presence of food sources and numerous harbourage places. A pest infestation in a food establishment may leads to contamination by foreign matter (e.g., insect parts, rodent hair, etc.), pest urine/faeces, and/or pathogenic microbes carried by pests. Improper handling of food and food debris, accumulation of unused articles and presence of structural defects render food establishment highly susceptible to pest infestations. Pests will not only pose food safety problems but they also transmit diseases to human. They can carry pathogenic organisms to foods physically by their bodies, hair and excreta.

4.4 Prevention and Control of Pest Infestation

Food establishments should have high standards of hygiene and repair to avoid pest infestation. Proofing measures should be adopted to prevent the entry of pests. Proper protection of food and disposal of waste is required to remove their food source.

a. Prevention of Entry of Pests

Particular attention should be given to the followings in the prevention and control of pests in food establishment:

- i. Any holes or crevices in ceilings, walls and floors should be sealed by cement or metal plates
- ii. Threshold clearance of doors should be lowered to not more than 6 mm and metal kicking plates should be affixed at the lower edges of doors and door-frames to prevent entry of rats and mice
- iii. Windows, ventilation openings and doors should be installed with mesh screens of (16 mesh to 25.4 mm (16 mesh to 1 inch). Doors / screen doors should be self-closing and kept closed at all times
- iv. Any missing or damaged gratings of drains should be installed or replaced immediately.

b. Elimination of Harbourage for Pests

- i. False ceilings should be avoided in food preparation or storage areas as far as possible
- ii. Any defects on walls, floors, ceilings, woodwork and all other parts of the structure should be promptly repaired.

- iii. Unused articles or equipment should not be stored in food establishment. If storage is unavoidable, they should be moved regularly to eliminate harbourage of pests.

c. Elimination of Food Sources to Pests

- i. All foods as well as condiments should be covered and stored properly in sealed containers.
- ii. Floors of food establishment should be kept clean and free from food remnants, especially overnight. Preparing food or cleaning utensils is strictly prohibited in the yard or the rear / side lanes.
- iii. Refuse should be stored in refuse containers with well-fitting covers. Refuse bags should be tied up before disposal to prevent spilling and attraction of pests. They should be cleared at least once a day, preferably every night to avoid leaving refuse overnight.

d. Eradication of Pests

- i. Pest control devices should be designed and located to effectively control the presence of pests in a food establishment. Insect control devices designed to trap insects by adhesive or devices that may expel the insects or insect fragments should be installed so that the dead insects or insect fragments cannot fall onto exposed food or equipment. To be effective, insect traps (sticky pads or similar devices) should be changed regularly or when loaded with insects.
- ii. Electric Fly Killers (EFKs) equipped with catch trays can be used to eliminate flying insects in food establishment. The EFK should be placed at least 1.5m (preferably 4.5 – 6 M) away from a food handling area. Only low wall or ceiling mounted type EFKs should be used, and EFKs should not be directly above food preparation or storage areas.
- iii. Pest control activities shall be done by specialist pest control agencies licensed and approved by the concerned Department to operate in Dubai. They shall use approved chemicals and methods. The food establishment has the primary responsibility to ensure that a competent person carries out the pest control operation in the establishment.
- iv. Rodenticides and insecticides should be applied in such a manner as not to contaminate foods – they should not be applied while food production / preparation is taking place, and all open foods should be well covered and protected.
- v. Establishment specially restaurant operating 24 hours should use physical control method to prevent chemical contamination during treatment.

- vi. In the event of pest infestation, any contaminated equipment, utensils, clothing and food contact surfaces should be thoroughly cleaned and disinfected. Any food that has been contaminated by pests or pest control chemicals should be disposed off.

e. Monitoring and Detection of Pests

- i. Food establishment shall place robust and tamper-resistant traps appropriate for the target pest in key locations in order to identify pest activity.
- ii. A map of traps shall be maintained.
- iii. Traps shall be placed in a way that prevent potential contamination of materials, products or facilities.
- iv. Food establishment shall monitor these traps on regular basis to identify new pest activity.

f. Keeping of Records

- i. Management of food establishment shall use the Foodwatch platform for managing all documentation and recording of data linked to pest management.
- ii. Data relevant to contracting of the supplier, visit reports, and details of corrective and preventive actions must be maintained on Foodwatch.

Rationale:

Presence of pests increases the likelihood of contamination of food and may cause significant damage to a food establishment. Properly designed and installed pest control devices can be used as a means of eliminating pests.

To ensure that pests are properly, effectively and safely eradicated, the Person in Charge should rely on approved pest control agencies and emphasize integrated pest management practices that minimise the reliance on chemical controls (if pest control measures require the application of chemicals). Since chemicals used to eradicate pests may also be toxic to humans, food should be adequately protected while these substances are being applied in the food establishment. Food establishments which have become infested should be thoroughly cleaned to eliminate pest harbourage. Surfaces contaminated by pests should be cleaned and disinfected to destroy microbial pathogens which might be present, and which might contaminate foods.

The first and best line of defense is to prevent entry of pests by proper inspection and maintenance of the establishment. The second line of defense is to deprive pests of food sources by proper storage of food and prompt removal of refuse, food remnants and spills. To verify that appropriate pest control measures have been undertaken, all aspects of pest control operations shall be documented and monitored.

4.5 Use of Chemicals and Toxic Substances

- a. Chemicals, cleaning and disinfecting compounds and other toxic substances kept in a food establishment shall be:
 - i. used in compliance with the manufacturer's labelling, directions or specifications and approved by the concerned department

- ii. used only in such a manner and under such conditions so that the substances do not contaminate food, equipment and food contact surfaces, or cause a health hazard.
- b. The chemicals, cleaning and disinfecting compounds and other toxic substances shall be stored:
 - i. in a compartment separate from food, food contact surfaces and utensils
 - ii. in clearly labelled, non-food containers, which are (where appropriate) lockable.

Rationale:

Special care should be taken when handling dangerous or toxic substances in food establishment. They should be used according to manufacturer's specifications, not only to ensure they function as intended but also to ensure worker safety.

To prevent the contamination of food products, dangerous or toxic chemicals shall be kept in containers, which are clearly labelled to identify the contents, and stored in areas separate from food and food equipment. Locked containers or storage facilities can prevent malicious or accidental contamination of food.

5. Personal Hygiene

5.1 Personal Health and Illnesses

- a. High standards of personal hygiene should be maintained in all food establishments to ensure that those who come into contact with food are not likely to contaminate food by:
 - maintaining an appropriate degree of personal cleanliness
 - behaving and operating in an appropriate manner.
- b. All food handlers should be in good health, have good eyesight and be able to read, especially if they are responsible for checking thermometers, instructions on labels, date coding etc.
- c. Food handlers should undergo medical fitness tests conducted by the concerned government authority and retain relevant occupational health cards.
- d. All staff engaged in food handling must:
 - i. be free from any symptoms of illnesses or communicable diseases such as diarrhoea, vomiting, fever, sore throat, abdominal pain and jaundice
 - ii. not be carriers of food-borne diseases e.g. typhoid/paratyphoid, cholera, hepatitis type A
 - iii. not be suffering from discharging wounds or sores on any exposed part of their bodies; or from discharge from their ears, eyes or noses.
- e. A food handler should be instructed in writing to report to the person in charge if they are suffering from a communicable disease in the following situations:
 - i. they have any symptoms associated with an acute gastro-intestinal illness, such as diarrhea, fever, vomiting
 - ii. they are suspected of causing or being exposed to a confirmed communicable disease outbreak or
 - iii. they live in the same household as a person who is diagnosed with a communicable disease.
- f. If a food handler is suffering from an illness or communicable disease, the Person in Charge is responsible for ensuring appropriate action is taken. This may include excluding the individual from activities that involve the handling of food or food contact surfaces, food utensils and equipment, or authorizing the individual's absence from the work place.
- g. When returning to work after medical leave or illness, food handlers should have written clearance from the treating physician, particularly in the case of diagnosed, reportable communicable diseases.

5.2 Injuries

- a. Food handlers with open infected lesions, cuts, wounds on their bodies must not be allowed to handle food or to come into contact with food utensils, equipment and food contact surfaces.

- b. Food handlers with clean cuts / wounds can work if the cuts are completely protected by brightly colored, waterproof dressings that can be spotted easily if fallen in to the food.

Rationale:

Several types of communicable disease can be transmitted by consumption of food. Food handlers should eliminate the opportunity for pathogenic micro-organisms being transferred to food and spread to consumers.

Food handlers can carry communicable diseases, especially if they themselves have been infected or are in contact with persons or objects that may carry the harmful microbes of those diseases. Consequently, food handlers may spread these diseases throughout the food establishment if they do not maintain an appropriate level of personal hygiene and avoid habits that may contaminate food.

Some food poisoning bacteria are commonly found on open wounds or cuts of their bodies. Illnesses may be spread to consumers if food handlers suffering from illnesses or with open wounds are allowed to take part in food activities.

5.3 Personal Hygiene Practices

- a. Food handlers should maintain high levels of personal hygiene at all times.
- b. In the course of handling food and for any person entering a food preparation or storage area, hair should be covered with a clean hat or hair net. Where required, beards should be completely covered with beard nets.
- c. While in food handling area, food handlers should not wear watches, or jewellery which may easily become detached (e.g. ear rings).
- d. Only clean and preferably light colored outer clothing or protective overalls should be worn by food handlers. If they become soiled during food preparation, they should be changed or cleaned as necessary. Food handlers should have at least 4 sets of uniforms to ensure that they can change to clean uniforms when necessary.
- e. Hand hygiene is an important step to prevent spread of foodborne illnesses.
 - i. Hands of food handlers should be kept clean at all times. Nails should be kept short and free of nail varnish
 - ii. Food handlers shall wash their hands& dry their hands-
 - before commencing work
 - before handling food
 - after visiting the toilet
 - after putting on or changing a wound dressing
 - after dealing with an ill colleague or customer
 - after coming into contact with pests or their faeces
 - after handling contaminated raw foods of animal or plant origin
 - after handling soiled equipment or utensils
 - after coughing, sneezing, smoking, eating, drinking or blowing nose
 - after handling animals or waste

- after engaging in any activities that may contaminate hands (e.g. handling money, carrying out cleaning duties, etc.) or
 - after returning from a break.
- iii. hand washing must be frequent, thorough and performed in hand wash basins
- iv. wearing gloves should not be an alternative to proper hand washing.

5.4 Personal Habits

Inside food preparation areas, food handlers should refrain from performing the following behaviors/habits which may result in contamination of food:

- i. smoking or using tobacco and spitting;
- ii. chewing, eating, sneezing or coughing over unprotected food or food contact surfaces;
- iii. touching ready-to-eat food with bare hands;
- iv. sitting, lying or standing on any surface liable to come into contact with food;
- v. tasting food with fingers; and;
- vi. touching hair or other parts of bodies such as noses, eyes or ears
- vii dining inside food preparation area.

Rationale:

Pathogens are commonly found on the skin and in the noses of healthy people. Scratching the head and nose can result in bacteria being transferred by hands onto food, which may cause illnesses to customers. Smoking in food rooms may cause food contamination by cigarette ends, ash or hands. Prevention of foodborne illnesses should begin with good personal hygiene practices by food handlers in both personal cleanliness and habits to prevent contamination of food by pathogens.

5.5 Visitors

Any visitor or contractor in a food preparation area should be appropriately dressed and should observe the same hygiene as food handlers, including hand washing, protective clothing and hair restraint policies. They should refrain from coming into proximity or contact with food and food equipment, and from any activities that could contaminate food. In a food establishment where contracting staff are working as food handlers, they should comply with the requirements of clause 5 and 6.

6. Training for Food Safety

The management of food establishments and service providers should maintain a documented training plan for all employees based on their training needs listed in Annex 4 of this Code.

6.1 Role of the Person in Charge

- a. The Person in Charge in a food establishment should ensure that all personnel working in a food establishment are trained to a level of food safety training appropriate to the type of work they are involved in. The requirements are specified in Annex 4 of this Code.
- b. The PIC should ensure that the appropriate training program is chosen. After successful completion of the formal training program, the food handlers should be competent and capable of demonstrating the skills at work.
- c. The PIC must carryout a periodic assessment of food handler's behaviour. When the assessment indicates the lack of food safety understanding, the person must be re-trained.
- d. When food handling staff are hired for short or long term from a non-food business, it is the responsibility of the PIC of the food business to ensure that the hired staff have formal food safety training.
- e. The PIC must document the status of training of all employees and their relevant particulars.

6.2 Training Program

The training program selected from Annex 4 of this Code should be based on the level of food safety risk in the food establishment, as listed below.

- a. All food handlers must be formally trained on food safety.
- b. Personnel who are not directly involved in food preparation, but are involved in managing food related services (such as a person handling the buffet counter, food delivery etc.), should also be formally trained.
- c. Food handlers should be trained in food safety to a level appropriate to the job they perform. Such trainings should also be based on the level of food safety risk in the food establishment. Factors for assessing the level of food safety risk include:
 - i. the nature of food produced or manufactured in the establishment;
 - ii. the manner in which food is handled or served;
 - iii. the type of menu items or the complexity of the processes used (i.e., prepared-from-scratch menu items versus preparation or reheating of pre-packaged, ready-to-eat foods; and
 - iv. the number of meals served daily, the size of establishment, and the type of customers the food is catered to (i.e., vulnerable populations).

- d. Formal food safety training must be obtained from a training centre approved by the Department.

6.3 Continuing Educational Training

- a. Every food establishment should promote food safety education through ongoing training, which may include additional classroom instruction, on-the-job training, seminars, and employee meetings.
- b. Food handlers should participate in a refresher or updating course after two years of training or, shall be retrained if incompetency in food handling practices is noticed.
- c. The PIC shall provide evidence of continuous learning and refresher training appropriate to the level of food safety risk in the business.

7. Provisions and Requirements Applicable to Import, Sale and to Export of Foods

Food establishment that import and export food in to Dubai should meet the requirements specified in this section. Where applicable, such establishments shall meet other local, national, regional requirements specific to products and processes.

7.1 Pre-Import Requirements:

- a. Food establishments involved in food import and export shall meet the licensing requirements specified in Section 2 of this Code. The business activity should be related to foodstuffs trading or a general trading.
- b. Further to that, the food establishment shall:
 - i. register in the Food Import and Re-Export (FIRS) system;
 - ii. pay the required deposit amount based on the activity; and
 - iii. register the food items in the Federal System
- c. The importing establishment shall submit the product label for a formal assessment through the online system and obtain prior approval to ensure compliance with relevant product regulations.
- d. When products are imported through the ports in Dubai, the food establishment should ensure that they provide:
 - i. required documents to release the consignments are provided at the point of import;
 - ii. original health certificates that have all relevant consignment details issued by the competent authority of the exporting country;
 - iii. provide packaging list matches the actual imported items and the consignment reference number
 - iv. all meat and poultry products, and food containing ingredients from animal source like gelatin shall be accompanied by Halal Certificated issued by by Halal Certification Bodies approved by the concerned department.
 - v. any additional documents required by the concerned department according to international and local food notifications (such as certificate stating the product is free of Dioxin /a certain pesticide residue free/a certain color and heavy metals etc.)
 - vi. supporting documents issued by the competent authority of the country of origin in case of any claim on the food label such as Organic / Genetically Modified Organism free (GMO Free) products and other health or nutritional claims-whenever required.
- e. Food establishment shall ensure that food is procured only from sources that are regulated by the relevant food authority in the country of origin.
- f. When necessary, food establishment should test the food item in an accredited laboratory before importation to avoid any rejection of consignment after the arrival

- g. The person in charge of the operations relevant to the food in a trading establishment should be formally trained and certified as a Food Trade Person in Charge.

7.2 Post-Import Requirements

Once the food is imported to Dubai, the food establishment shall:

- a. Ensure compliance with any specific requirements specified at the time of release of the product in the form of 'undertaking'
- b. Execute the decisions regarding consignments that are rejected within grace period and provide the proof to the concerned department.
- c. Ensure immediate withdrawal or recall of products whenever required by the concerned department.
- d. Provide their suppliers any information and instructions of use that is relevant to handling and sale of food.

8. Miscellaneous

8.1 Food Labelling

- a. Food establishments should not import, sell, consign or deliver any pre-packed food item if the package on the food does not bear a label containing all the information required by Food safety Department.
- b. Unless otherwise exempted by the Department, the package should bear a label that is printed on or securely attached in a prominent and conspicuous position to the package, containing such particulars, statements, the required information in Arabic.
- c. Pictorial, or other descriptive matter appearing on or attached to, or supplied along with or displayed on the food or the packaging of the food, shall not include any false or misleading statement, word, brand, picture, or mark purporting to indicate the nature, stability, quantity, strength, purity, composition, weight, origin, age, effects, or proportion of the food or any ingredients thereof.
- d. Illegal or unauthorized nomenclature, terminology, coding, illustration/photograph shall not be used on the packaging. This includes but is not limited to:
 - i. any words, expressions, pictures or symbols which are offensive to any religion;
 - ii. any photos, pictures, expression or words which imply any immoral impressions;
 - iii. any words or expressions which are offensive to the traditions and values of the country or its symbols.
- e. Commercially manufactured pre-packaged food items sold as individual units should bear or have embossed or impressed on the label or elsewhere of the package, a date mark with the production and expiration dates, in the manner specified and approved by the Food safety Department.
- f. Date marking on the original packaging should not be removed, erased, altered, obscured, superimposed or in any way tampered with.
- g. Where the validity of the date mark of any pre-packaged food is dependent on its storage, the storage requirement of that food should also be stated on its label or package.
- h. In food service establishments, refrigerated ready-to-eat high-risk foods, prepared and held for more than 6 hours, should be marked with the expiration time or date.
- i. Where necessary, instructions for use after opening the original packaging should be provided. e.g. store chilled after opening and consume within three days.
- j. For those pre-packaged foods that are intended to be eaten cooked, the following requirements apply:
 - i. instructions for use are required on the food label when it would be impossible to prepare the food in the absence of such instructions
 - ii. instructions for use should be indicated in such a way to enable appropriate use e.g. where cooking is required then cooking instructions must be provided

- iii. where cooking or reheating instructions are included, they should be validated by the producer or manufacturer to ensure the pathogen(s) of concern will be destroyed and the product is safe to consume. This validation study should take into consideration whether the products will be cooked/reheated from frozen or thawed prior to cooking. These instructions e.g. cook from frozen or thaw prior to consumption should also be included on the label.

8.2 Product Shelf Life

- a. The food establishment is responsible for determining the shelf-life of food products under defined conditions, which should take into account reasonably foreseeable conditions of distribution, storage and use.
- b. For those products for which the shelf-life is mandated by the Food safety Department, the shelf- life should not exceed the time specified by the Department.
- c. In food service establishments such as restaurants, shelf-life of high-risk or perishable foods prepared as per the process outlined in clause 3.2 to 3.4 of this Code do not require validation if stored for three days or less. However, food establishments should, as a part of the review of the food safety program, periodically verify the effectiveness of control measures and the stability and suitability of the product during the shelf-life.
- d. Food manufacturers, and establishments such as bakeries, catering companies and departmental stores that prepare and distribute pre-packaged high-risk or perishable foods should validate the shelf-life and obtain shelf life approval from the Food safety Department prior to the label approval process.
- e. While determining the shelf life, the food establishment should take account of the following:
 - i. controls on suppliers for assuring raw material quality;
 - ii. analysis of trends in results of microbiological testing of raw materials and final products;
 - iii. analysis of trends in results of microbiological testing of the process environment and equipment;
 - iv. hygiene controls applied in the process environment;
 - v. well established industry standards;
 - vi. rate of microbiological spoilage and maintaining the organoleptic quality under foreseen conditions of storage and use.
- f. Pre-packaged foods that are prone to rapid deterioration after the original packaging is removed (such as canned foods, juice bottles etc.) should be used as per the recommendation of the manufacturer.

- g. Shelf life of raw cereals, pulses and dry foods depend on the raw materials, storage and handling. Such products are exempted from the requirement for validation. However, such foods should be handled and stored in an appropriate manner.

Note: Validation study should take into consideration the intrinsic and extrinsic properties of the product that affect shelf-life. Intrinsic properties are those properties that are an inherent part of the food product such as pH and water activity. Extrinsic properties are the properties of the environment in which the food is stored such as temperature and atmosphere.

Rationale:

No food can be kept indefinitely. In the case of high -risk products, shelf life could have a significant impact on the safety of the product. Product shelf life should be established by taking into account of the production environment, packaging and storage conditions, and the handling of the product. The identification of the pathogens associated with raw materials and the production environment is critical for the accurate determination of a safe shelf-life. It is important to note that deviations from normal conditions, such as high levels of initial contamination in raw materials or elevated temperatures during storage or transport will impact on the safety of the product during its shelf-life.

8.3 Product Menu in Food Service Establishments

- a. Food service establishments such as restaurants and cafeteria shall have product menu printed both in Arabic and English. Foods with Non-Halal ingredients shall be clearly identified in the menu.
- b. Food service establishments such as restaurants and cafeteria shall provide all information about the product when requested by the customer.

8.4 Filtration and Disinfection Facilities for Fish Tank Water

- a. Water used for keeping marine live fish or shellfish intended for human consumption should be filtered and disinfected by filtration and disinfection facilities. These facilities should be maintained in good working order at all times.
- b. The filtration / disinfection system should be a closed loop system capable of providing continuous filtration and disinfection action.
- c. Dedicated staff should be assigned to take care of the cleaning and maintenance of the whole system.
- d. Fish tank water should be changed regularly to remove harmful substances produced by the stock after a period of time.

8.5 Single-Use Items

When using single-use items (non-reusable) such as instrument, apparatus, utensil or any other item for handling of food, such as drinking straws, disposable eating and drinking utensils, disposable food containers and disposable gloves, tissue paper etc.;

- a. Such items shall be food grade & should be properly protected from risk of contamination by storing inside dust and pest proof containers or cupboards until they are used, and should be discarded if they are contaminated. They should not be re-used for any other purpose.
- b. If gloves are used for handling food,
 - i. hands must be washed properly before wearing gloves and when they are removed;
 - ii. only disposable gloves shall be used, which shall be used only for single task, e.g. either handling ready-to-eat food or raw food;
 - iii. the same disposable gloves should never be used to handle raw food and then ready-to-eat food;
 - iv. they should be discarded if damaged, soiled, or when interruptions occur in the operation.
- c. Food establishment without facilities for cleaning and sanitizing kitchenware and tableware shall provide only single-use kitchenware and articles.

Note: *Gloves are not an alternative for proper hand washing.*

Rationale:

Single-use items are not manufactured to permit effective cleaning and disinfecting. If these items are reused, food coming into contact with these items may become contaminated. Use of the same disposable gloves for handling raw and ready-to-eat food easily leads to cross-contamination.

8.6 Animals and Pets

- a. Animals, live birds, and pets such as dogs and cats are prohibited from entering food preparation areas and in areas where food is stored, handled or displayed unprotected.
- b. In food service businesses where pets or service animals are allowed in the dining area with prior approval from the concerned authority, there should be a clear notice in English and Arabic outside the food establishment stating that “Pets are allowed in the facility” and it should be clearly visible to the consumers who walk in to the premises.
- c. The establishment shall clearly provide a policy in English and Arabic on permissible behaviour and interactions in a written policy to the guest at the point of entry.
- d. The establishment must take adequate precaution to ensure that containers, utensils and equipment are protected from animal contact.

- e. Pets and service animals should not be fed in the food service facility unless there are special facilities for feeding them. These facilities must be approved by the concerned department as a part of the design and layout.

8.7 Handling of Non-Halal Food/Product

Halal is an Arabic word meaning “allowed” or “lawful”. Food is considered Halal if animal slaughtered or food prepared in the manner prescribed by Islamic law:

- f. does not consists of any part of or item from animals that are prohibited for Muslims by Islamic law, or halal animals that have not been slaughtered according to Islamic law
- g. does not have any substance that is considered impure in Islamic law
- h. is not prepared, processed or manufactured using equipment or utensils that are not free from impurities as defined by Islamic law
- i. that, in the preparation, processing or storage stage, does not come in contact with any kind of food that does not meet the requirements of para(s) (a), (b) or (c) or any substances that are considered impure by Islamic law.

8.7.1 General Requirements

- a. Food establishment importing, exporting, processing, storing, selling & serving Non-Halal foods shall obtain permit and layout approval from Food Safety Department.
- b. Food establishment shall not mix Non-Halal Food/Products with Halal foods during transportation, storage, preparation, or display.

8.7.2 Requirements for Imports, Purchase and Sale of Non-Halal Food/Products

- a. The food label on packaged Non-Halal Food/Products shall clearly and visibly state the ingredients in Arabic and English Languages.
- b. The importer/trader has the primary responsibility to ensure that Halal Food/Products are not mixed with Non-Halal Food/Products or ingredients.
- c. The importer/trader should ensure that Non-Halal Food/Products are sold ONLY to food establishments that have prior permit for the sale of Non-Halal Foods//Products.
- d. The importer/trader shall transport Non-Halal Food/Products in a separate vehicle designated for non-halal Food/Products only.

8.7.3 Requirements for Storage of Non-Halal Food/Products

- a. Refrigerated and frozen Non-Halal Food/Products shall be stored in designated refrigerators or freezers.

- b. Dry Non-Halal Food/Products shall be stored in a separate designated area or facility.
- c. Non-Halal Food/Products shall be stored in separate cabinets, bins, and storage vessels to prevent mixing with Halal Food/Products.
- d. Containers shall be clearly labelled to prevent confusion or contamination. For example, in case of pork products, it is preferable to have the items colour coded and marked “pork.”
- e. Food establishment shall have the permit from food safety department to store Non- Halal Food/Products & shall ensure that Non-Halal Food/Products are received ONLY from food establishment that have prior permit for the sale or/and preparation of Non-Halal Food/Products.

8.7.4 Requirements for Preparation of Non-Halal Food/Product

- a. A complete physically separated area shall be provided where Non-Halal Food/Products are prepared, processed, displayed or sold and shall not be opened directly to Halal Food/Products preparation, storage & handling area.
- b. Separate, color coded cutting boards and knives shall be used for Non-Halal Food/Products.
- c. Cutlery, crockery, utensils & equipment used for Non-Halal Food/Products activities shall be clearly marked/identified.
- d. The equipment and utensils designated for Non-Halal Food/Products preparation shall not be used for the preparation of Halal Food/Products.
- e. Cutlery, crockery, utensils and equipment used for Non-Halal Food/Products shall be washed separately.
- f. Outlet serving Non-Halal Food/Products items on buffet shall have a separate & adequate pre washing facility for crockery, cutlery & utensils before final washing.
- g. Access to Non-Halal Food/Products preparation area shall be restricted, as much as practically possible, to designated food handlers.
- h. Food handlers shall not handle Halal & Non-Halal Food/Products at the same time.
- i. Non-Halal Food/Products shall neither be prepared nor stored in areas that are for Halal Food/Products.
- j. Where non-halal Food/Products are handled, a sign board shall be placed in both Arabic and English language stating ‘Non-halal Food/Products only.’ The signage should be clearly visible to food handlers.

8.7.5 Serving Non-Halal Food/Products in Food Outlets

- a. Food establishment operator has the primary responsibility to inform the customer that the restaurant serves Non-Halal Food/Products.

- b. Non-Halal Food/Products shall clearly be mentioned in Menu card as **PORK, ALCOHOL** or **NON-HALAL** Food/Products
- c. Non-Halal Food/Products shall not be served along with Halal Food/Products. Separate serving utensils and equipment should be used.
- d. Outlets that serve Non-Halal Food/Products in buffet area shall have a separate counter that at least 2 meters away from Halal Food/Products.
- e. In display, Non-Halal Food/Products shall be clearly stated in Arabic and English.

***Note:** Preparation of pork is allowed in 5 Star hotels and Clubs with prior approval.*

8.7.6 Sale of Non-Halal Food/Products

- a. A departmental store or supermarket shall be allowed to display and sell Non-Halal Food/Products after prior approval from the food safety department of Dubai Municipality.
- b. Non-Halal Food/Products can be sold in a departmental store or supermarket with an area not less than 7000 Square Feet.
- c. Space provided for pork products should be adequate and based on the extent of activity.
- d. Preparation and storage facilities shall be provided as per the requirements mentioned in this Code.
- e. If there is butchery for handling pork products, it shall be separate and equipped with all necessary supplies.
- f. Departmental stores and Supermarkets must have a designated person to handle Non-Halal Food/Products, and a separate cash counter to sell such products.

8.8 Product Traceability and Recall

- a. A system to ensure traceability of food and any other substance intended to be or expected to be incorporated into a food should be established at all stages of food importation, production, processing and distribution.
- b. All food items imported, sold, consigned or delivered in to the Emirate of Dubai must be registered with the Food safety Department.
- c. Food establishments shall be able to identify any person/establishment that has supplied them with, or any substance intended to be, or expected to be, incorporated into food or packaging material. To this end, establishments should have in place documented systems and procedures which allow for this information to be made available to the Food safety Department if required.
- d. Food manufacturers should have a system to identify and trace product lots and follow this through all raw materials (including ingredients, all types of packaging materials and

processing aids), all stages of processing and distribution of the finished product to the customers in a timely manner.

- e. Food establishments shall have in place documented systems and procedures to identify businesses to which their products have been supplied. This information should be made available to the Food safety Department when required.
- f. Food which is placed on the market or is likely to be placed on the market in the community shall be adequately labelled or identified to facilitate its traceability, through relevant documentation or information in accordance with these regulations.
- g. Food manufacturers, importers and distributors shall promptly withdraw or recall food products they import, produce or distribute to other establishments if such foods are found to be unacceptable, unsafe or adulterated, or do not conform to the Islamic law or the traditions and norms in the United Arab Emirates.
- h. Food manufacturers, importers and distributors shall promptly recall foods if the Food safety Department or other concerned authorities issue a memorandum or a decree to recall specific food from Dubai markets.
- i. Food establishments should notify the Food safety Department in the event of a withdrawal or a recall. Consumers should be notified if the product has entered the market and has reached the consumers.

8.9 Customer Complaint Handling

- a. The food establishment should have a customer complaint handling system that gives guidance on how to respond, investigate and take preventive action when there is a food related complaint.
- b. All food related complaints which include product related complaints and complaints pertaining to suspected foodborne illnesses should be logged in the complaints record.
- c. Complaints must be investigated promptly and efficiently, and the details of investigation and corrective action must be retained for a period of at least one year.
- d. Food establishment operator must contact the Food safety Department immediately if:
 - i. an outbreak of foodborne disease is suspected;
 - ii. a customer is injured or critically sick.

Note: *A foodborne-disease outbreak is defined as an incident in which two or more persons experience a similar illness resulting from the ingestion of a common food.*

8.10 Emergency Preparedness Plan

- a. Food establishment shall have procedures in place to respond to any potential emergency situations or incidents that can have an impact on food safety such as but not limited to food outbreaks, power outage, flooding, fire & storm.
- b. Food establishment shall identify & communicate all such incidents to the Food Safety Department, customers & suppliers.
- c. Food establishment must take appropriate actions suitable to the type, extent & potential food safety impact in order to reduce the consequences.

8.11 Use of Wood in Food establishment

- a. Hard maple or an equivalently hard, close-grained wood may be used for cutting boards, cutting blocks, bakers' tables; and utensils such as rolling pins, doughnut dowels, salad bowls, and chopsticks. Such items should be suitable for contact with food, disinfection, and be maintained well.
- b. Wooden pallets should be handled and stored in a way that poses no threat to the safety of the food. When wooden pallets are used:
 - i. the food safety Program should include a 'wood use policy' that clearly states where wooden pallets will be used
 - ii. an effective documented verification practice must be in place to ensure that the pallets are clean and free of damage and pests.

Note: Both wooden and plastic pallets should be clean and free of damage. Chipping of wood can lead to contamination of food and measures should be in place to ensure that equipment are well maintained.

Rationale:

The limited acceptance of wood as a food contact surface is determined by the nature of the food and the type of wood used. Moist foods may cause the wood surface to deteriorate and the surface may become difficult to clean. In addition, wood that is treated with certain preservatives may lead to illness due to the migration of the preservative chemicals in the wood, into the food. Soft wood shouldn't be used if in contact with food

8.12 Use of Linens and Other Accessories

- a. Use of cloths for drying of food contact surfaces of equipment is not recommended as the cloth is likely to contain bacteria or contaminants that would be transmitted to the equipment during the drying process. Food contact surfaces should be air dried. Dry clothes or disposable paper towels may be used for polishing dried utensils.

- b. Aprons, clothing and uniforms should be clean and fit to wear. Buttons should preferably be avoided for those who directly handle food to prevent them from falling into food. Protective clothing should be washed at least once a day, or when it becomes soiled or sticky.
- c. Linens such as wiping towels, table cloths, aprons, clothing, uniforms, etc. may be used in food establishment. They should be of light-color, kept clean and in a hygienic condition.
- d. When linens are used :
 - i. Clean linens should be free from food residues or other soiling. They should be washed if they become wet, sticky or soiled
 - ii. Linens should be cleaned and disinfected as often as necessary. This may be achieved by a hot wash in a commercial washing machine, by immersing in boiling water for not less than one minute or by using a disinfection agent approved by the concerned department
 - iii. Linens should be used for one single purpose only. For example, wiping towels used for wiping food spills on table surfaces should not be used for any other purpose such as for polishing dried utensils or wiping surfaces used for raw animal foods
 - iv. Soiled linens should be kept in suitable receptacles or laundry bags away from food preparation areas to prevent contamination of food, food contact surfaces, food equipment and utensils.
- e. Table cloths should be cleaned after each use as they have been in contact with food remnants and debris.
- f. Menu cards that come in contact with hands, food remnants and debris should be kept clean at all times.

Rationale:

Linens are likely to contain foreign substances such as hair, dirt and micro-organisms, all of which would contaminate food and equipment. They should not be allowed to come into contact with food or food equipment / utensils unless thoroughly cleaned and disinfected. Napkins and menu cards for customers may help transmit diseases from person to person, unless adequately cleaned and disinfected after each use.

8.13 Food Fraud

Food fraud is an act of an intentional or deliberate addition, substitution, alteration or misrepresentation of food product, ingredients, label or packaging to hide the true identity or contents of a food ingredient or product for economic gain.

- a. The establishment must also consider known or reasonably foreseeable hazards that may be intentionally introduced for purpose of economic gain while identifying the potential hazards (Clause 3.1.3).

- b. Food establishment shall prepare, implement & document a Food Fraud Vulnerability Control Plan, which includes:
- i. Documented vulnerability assessment using suitable methods to identify significant vulnerabilities at each step, process & procedure for each food type manufactured, processed, packed or stored at food establishment.
 - ii. Documented & systematic identification of control measures to ensure that the significant vulnerability identified at each process step is minimized or prevented.
 - iii. Documented procedure for the systematic monitoring of control measures.
 - iv. Appropriate corrective action as appropriate to the nature of the process and the control measures.
 - v. Regular verification of the program
 - vi. Appropriate records to demonstrate the compliance with the requirements of this clause.

Annex 1 – Reduction of Contributing Factors of Foodborne Illness

The foodborne disease surveillance data in Dubai from 2011 to 2019 have consistently identified major contributing risk factors related to food safety practices within the food industry that contribute to foodborne illness outbreaks. Many segments of the food industry require significant improvements in the control of these risk factors. These contributing risk factors include:

A1-1 Use of unpasteurized eggs in foods that are not heat treated

A1-2 Poor disinfections of leafy green salad vegetables

A1-3 Improper holding/time and temperature of ready to eat foods

A 1-4 Poor disinfection of food equipment and food contact surfaces

A 1-4 Sourcing and handling of raw-ready to eat foods of plant and animal origin

A 1-6 Poor management by the Person in Charge of Food Business

Contributing Risk Factor	Interventions for Reduction
A 1- 1 Use of unpasteurized eggs in foods that are not heat treated	<ul style="list-style-type: none"> Identify all the foods with egg or egg-based ingredients. Verify whether the cooking temperature is sufficient to ensure microbiological safety of the product (75°C or above). If the food is not heat treated or the full cooking temperature is not achieved to ensure microbial safety, ensure the use of pasteurized egg. If eggs are pooled, store refrigerated and use the pooled eggs within 2 hours Always store eggs refrigerated. Ensure that eggs are sourced from suppliers registered on Foodwatch and link them as 'Supplier of eggs.' <p><i>Note: Fresher eggs have been found to have lesser bacterial load compared to older eggs</i></p>
A 1-2 Poor disinfections of leafy greens, fresh herbs and salad vegetables	<ul style="list-style-type: none"> Ensure that fresh herbs and leafy greens are sourced from suppliers who can provide full trace-back of the products up to the farm. Clean and disinfect before use. Use separate sink or container for disinfection. If leafy greens/herbs are mixed with cooked foods (such as in biryani), ensure that the food is heat treated above 75°C after the greens are added. <p><i>Note: Leafy greens when used as garnish or added as an ingredient after cooking can introduce contaminants and pathogens. Subsequent temperature abuse can significantly increase the risk of foodborne illness.</i></p>
A 1-3 Improper holding/time and	<ul style="list-style-type: none"> Refer to Clause 3 of Food Code

temperature of ready to eat foods	<ul style="list-style-type: none"> • Ensure that hot and cold foods are held at appropriate temperature. Hot food should be held hot at 60°C immediately after cooking and held at that temperature until the food is served. • When the food is served after several hours of preparation, ensure that the foods are rapidly cooled and then served hot or cold when necessary. • Poor temperature control during storage and transportation has been a particular concern in catering. Cook-chill- reheat process must be used when necessary.
A 1-4 Poor disinfection of food equipment and food contact surfaces	<ul style="list-style-type: none"> • Refer to Clause 4 of the Food Code for details. • Ensure that there is adequate supply of cleaning and disinfection agents.
A 1-5 Sourcing and handling of raw-ready to eat foods of plant and animal origin	<ul style="list-style-type: none"> • Ensure full traceability of products. Ensure that suppliers provide adequate information about the source of the ingredients. • Ensure that the products are held at appropriate temperatures and used within the shelf life
A 1-6 Poor management by the Person in Charge of Food Business	<ul style="list-style-type: none"> • Person in charge must actively manage food safety • PIC must ensure that food safety management system is implemented, action taken when necessary.

The interventions shall be an integral part of the training curriculum for PICs. Consultants and auditors must provide adequate emphasis for verification of the effectiveness of the interventions.

Annex 2 - Guidelines for Microbiological Testing of Ready-to- Eat Foods

A2- 1 General requirements

A high level of protection of public health is one of the fundamental objectives of food law as laid down in the local and administrative orders on general principles and requirements of food safety. Microbiological hazards in foodstuffs form a major source of food-borne diseases in humans. Food control has evolved from a focus on end-product testing to preventative approach through adequate process controls along the chain. Nonetheless, laboratory testing remains an important component of any system which aims to produce safe food. Carefully planned programmes of sampling and testing provide an assurance that hygiene controls applied by food chain operators result in safe food products that comply with local, national and international food safety requirements and food standards.

Having regard to regulation - Local Order No. 11/2003 (Public Health & Safety in the Emirates Dubai) issued by Dubai Municipality, other relevant national and international standards, the Food Safety Department has set the following general principles for Microbiological sampling and testing.

1. Foodstuffs should not contain micro-organisms or their toxins or metabolites in quantities that present an unacceptable risk for human health.
2. Local Order No. 11/2003 (Public Health & Safety in the Emirates Dubai) lays down general food safety requirements, according to which food must not be placed on the market if it is unsafe. Food establishment operators have an obligation to withdraw unsafe food from the market. In order to contribute to the protection of public health and to prevent differing interpretations, it is appropriate to establish harmonised safety criteria on the acceptability of food, in particular as regards the presence of certain pathogenic micro-organisms.
3. Microbiological criteria also give guidance on the acceptability of foodstuffs and their processing, handling and distribution processes. The use of microbiological criteria should form an integral part of the implementation of HACCP-based procedures and other hygiene control measures.
4. The safety of foodstuffs is mainly ensured by a preventive approach, such as implementation of good hygiene and manufacturing practices based on the Food Code and application of procedures based on hazard analysis and critical control point (HACCP) principles. Microbiological criteria can be used in validation and verification of HACCP procedures and other hygiene control measures. It is therefore appropriate to set microbiological criteria defining the acceptability of the processes, and also food safety microbiological criteria setting

a limit above which a foodstuff should be considered unacceptably contaminated with the microorganisms for which the criteria are set.

5. According to Local Order No. 11/2003, food establishment operators are to comply with microbiological criteria. This should include testing against the values set for the criteria through the taking of samples, the conduct of analyses and the implementation of corrective actions, in accordance with food law and the instructions given by the competent authority. It is therefore appropriate to lay down implementing measures concerning the analytical methods, including, where necessary, the measurement uncertainty, the sampling plan, the microbiological limits, the number of analytical units that should comply with these limits. Furthermore, it is appropriate to lay down implementing measures concerning the foodstuff to which the criterion applies, the points of the food chain where the criterion applies, as well as the actions to be taken when the criterion is not met. The measures to be taken by the food establishment operators in order to ensure compliance with criteria defining the acceptability of a process may include, among other things, controls of raw materials, hygiene, temperature and shelf-life of the product.
6. Local Order No. 11/2003 on official controls performed to ensure the verification of compliance with food law, requires that official controls are carried out regularly, on a risk basis and with appropriate frequency. Those controls should take place at appropriate stages of the production, processing and distribution of food to ensure that the criteria laid down in this regulation are complied with by food establishment operators.
7. The producer or manufacturer of a food product has to decide whether the product is ready to be consumed as such, without the need to cook or otherwise process it in order to ensure its safety and compliance with the microbiological criteria. The instructions for use of a foodstuff are compulsory on the labelling when it would be impossible to make appropriate use of the foodstuff in the absence of such instructions. Such instructions should be taken into account by food establishment operators when deciding appropriate sampling frequencies for the testing against microbiological criteria.
8. Sampling of the production and processing environment can be a useful tool to identify and prevent the presence of pathogenic micro-organisms in foodstuffs.
9. Food establishment operators should decide themselves the necessary sampling and testing frequencies and develop a sampling plan as part of their procedures based on HACCP

principles and other hygiene control procedures. However, it may be necessary in certain cases to set harmonised sampling frequencies at community level, particularly in order to ensure the same level of controls to be performed throughout the community.

10. Test results are dependent on the analytical method used, and therefore a given reference method should be associated with each microbiological criterion. However, food establishment operators can use analytical methods other than the reference methods, in particular more rapid methods, as long as the use of these alternative methods provides equivalent results. Moreover, a sampling plan needs to be defined for each criterion in order to ensure harmonised implementation. It is nevertheless necessary to allow the use of other sampling and testing schemes, including the use of alternative indicator organisms, on condition that these schemes provide equivalent guarantees of food safety.
11. Trends in test results should be analysed, as they are able to reveal unwanted developments in the manufacturing process enabling the food establishment operator to take corrective actions before the process is out of control. It is strongly recommended that results be recorded in a way that the results can be analysed easily. Food establishments can use Microsoft excel or similar spreadsheets or use software programs that help analyse trends. The Department will continue to actively discourage storage of printed sheets of individual test results.
12. The microbiological criteria set in this document will be open to review and revised or supplemented, if appropriate, in order to take into account developments in the field of food safety and food microbiology. This includes progress in science, technology and methodology, changes in prevalence and contamination levels, changes in the population of vulnerable consumers, as well as the possible outputs from risk assessments.
13. The Food Safety Department will prioritise the testing of certain food products based on the foodborne disease surveillance data and the incidence data. Food establishments shall include such testing requirements when relevant to the business operations.
14. Food establishment operators shall ensure that foodstuffs comply with the relevant microbiological criteria set out in Table 1. To this end the food establishment operators at each stage of food production, processing and distribution, including retail, shall take measures, as part of their procedures based on HACCP principles together with the implementation of good hygiene practice, to ensure the following:

- a. that the supply, handling and processing of raw materials and foodstuffs under their control are carried out in such a way that the process hygiene criteria are met,
 - b. that the food safety criteria applicable throughout the shelf-life of the products can be met under reasonably foreseeable conditions of distribution, storage and use.
15. As necessary, the food establishment operators responsible for the manufacture of the product shall conduct studies to set the shelf life and to investigate compliance with the criteria throughout the shelf-life. The following questions should be considered while evaluating the product shelf life:
 - a. Has the manufacturer of the product carried out shelf-life studies to investigate compliance with the relevant food safety criteria under reasonably foreseeable conditions of distribution, storage and use?
 - b. Did the shelf-life studies include any or all of the following:
 - Was the characteristics of the product determined including pH, water activity, salt content, concentration of preservatives and the type of packaging system, taking into account the storage and processing conditions, and the possibilities for contamination of the product and the effect on the desired shelf-life?
 - Was there a review or consultation on available scientific documents and/or research data on the microbiological hazards associated with the food, after establishing the characteristics of the product?
 - Was any predictive mathematical modelling carried out for the identified microbiological hazards associated with the food and its characteristics?
 - Were any laboratory tests carried out to investigate the ability of identified pathogens to grow or survive in your product under different reasonably foreseeable storage conditions? i.e. challenge tests
 - Were any laboratory tests carried out to investigate the ability of identified pathogens of concern that may be present in your product during the desired shelf-life under reasonably foreseeable conditions of distribution, storage and use? i.e. durability tests
 - Are there microbiological hazards which may influence the safety of your product other than those addressed in GSO standards?
 - Has a margin of safety been applied to the shelf-life established under reasonably foreseeable conditions of distribution, storage and use?
 - Have systems been placed to evaluate the product shelf-life as part of a regular review of your food safety management system?

A2- 2 Testing Frequency and Criteria

1. Retail food service establishments that includes hotels, caterers, bakeries and manufacturers for Ready to Eat packaged foods should conduct microbiological verification of foods based on their outcome of the Food Safety Management System. Food samples that are tested should include:
 - Drinking water/ice
 - Animal foods that are served raw or partially cooked before consumption
 - High risk ingredients that are likely to introduce pathogens in to the food system including but not limited to foods and ingredients that have been previously associated with outbreaks
 - Swabs of food contact surfaces

***Note:** Food service establishments shall refrain from testing foods that have been fully cooked, especially if these food samples are collected immediately after cooking. If recontamination or spore germination is expected in foods that have a shelf life of more than 4 hours, such products can be tested for specific organisms of concern.*

2. When the frequency of sampling is not specified by the regulatory authorities, the sampling frequency must be determined by the food establishment operator. The type of food establishments that have to determine food sampling include but is not limited to manufacturing units, trading establishments, importers and exporters of food, catering units that supply pre-packaged food to retailers etc.

The appropriate sampling frequency must be determined through a risk assessment process considering the following:

- The microbial hazards of concern associated with the food, ingredients and the environment in the production facility
- Susceptibility of the intended consumers of the food
- Intended use of the food
- Historical issues identified by monitoring
- Food safety management system.

Such plans must be periodically reviewed for the appropriateness by a competent team and sampling frequency should be amended when necessary.

3. Food establishment operators shall perform testing as appropriate against the microbiological criteria set out in this Annex, when they are validating or verifying the correct functioning of their procedures based on HACCP principles and good hygiene practice.

4. Food establishment operators shall decide the appropriate sampling frequencies. Food establishment operators shall make this decision in the context of their procedures based on HACCP principles and good hygiene practice, taking into account the instructions for use of the foodstuff.

Note: The frequency of sampling may be adapted to the nature and size of the food establishments, provided that the safety of foodstuffs will not be endangered.

A2- 3 Specific Rules for Testing and Sampling

1. The analytical methods and the sampling plans must be standard and should be performed in accredited laboratories that meet the competency requirements of the standard ISO/IEC 17025:2005.
2. Samples shall be taken from processing areas and equipment used in food production, when such sampling is necessary for ensuring that the criteria are met. In that sampling the ISO standard 18593:2018 shall be used as a reference method.
3. Food establishment operators preparing or manufacturing ready-to-eat foods, which may pose a *Listeria Monocytogenes* risk for public health, shall sample the processing areas and equipment for *Listeria monocytogenes* as part of their sampling scheme.
4. The number of sample units of the sampling plans set out in this Annex may be reduced if the food establishment operator can demonstrate by historical documentation that it has effective HACCP-based procedures.
5. If the aim of the testing is to specifically assess the acceptability of a certain batch of foodstuffs or a process, the sampling plans set out in this Annex shall be respected as a minimum.
6. Food establishment operators may use other sampling and testing procedures, if they can demonstrate to the satisfaction of the competent authority that these procedures provide at least equivalent guarantees. Those procedures may include use of alternative sampling sites and use of trend analyses.

A2- 4 Testing Frequency and Criteria

The microbiological testing of ready-to-eat foods should be appropriate to the type of food sample being examined and to the processing it has received. Not all the organisms listed in the table are equally applicable to all food groups, nor should all the organisms listed be tested for routinely. Interpretation of results should also be based on knowledge of the product components and the production process. The significance of the microbiological tests that may be conducted is discussed below.

A2- 4.1 Aerobic colony count

The Aerobic Colony Count or the total viable count, is one of the most common tests applied to indicate the microbiological quality of food. The significance of ACCs, however, varies markedly according to the type of food product and the processing it has received. When ACC testing is applied on a regular basis it can be a useful means of observing trends by comparing ACC results over time.

Three levels of ACC are listed in **Table 1** based on food type and the processing/handling the food has undergone.

Level 1: applies to ready-to-eat foods in which all components of the food have been cooked in the process/preparation of the final food product and, as such, microbial counts should be low.

Level 2: applies to ready-to-eat foods which contain some components that have been cooked and then further handled (stored, sliced or mixed) prior to preparation of the final food or where no cooking process has been used.

Level 3: ACCs not applicable. This applies to foods such as fresh fruits and vegetables (including salad vegetables), fermented foods and foods incorporating these (such as sandwiches and filled rolls). It would be expected that these foods would have an inherent high plate count because of the normal microbial flora present.

If a specific ready-to-eat food is not included in table 1, food examiners and microbiologists should use their own judgment to assess where a product would fit – based on the type of product, the processing it has received, and the potential for microbial growth during storage.

***Note:** An examination of the microbiological quality of a food should not be based on ACCs alone. The significance of high (unsatisfactory) ACCs cannot truly be made without identifying the*

microorganisms that predominate or without other microbiological testing. When unsatisfactory aerobic colony counts are encountered microbiologists should attempt to identify the microorganisms that predominate. From these results, and additional detailed information about the food sample, it should be possible to provide a more helpful interpretation of high aerobic colony counts.

A2- 4.2 Indicators

Enterobacteriaceae

The family Enterobacteriaceae includes many bacteria that are found in the human or animal intestinal tract, including human pathogens such as Salmonella and Shigella. Enterobacteriaceae are useful indicators of hygiene and of post-processing contamination of heat processed foods. Their presence in high numbers (>10⁴ CFU/gm) in ready-to-eat foods indicates that an unacceptable level of contamination has occurred or there has been under-processing (e.g. inadequate cooking). Testing for Enterobacteriaceae is not applicable to fresh fruits and vegetables or foods containing these.

Escherichia coli

The presence of E. coli in fully cooked ready-to-eat foods is undesirable because it indicates poor hygienic conditions which have led to contamination or inadequate heat treatment. Ideally E. coli should not be detected and as such a level of <3 (the limit of the Most Probable Number test) has been given as the satisfactory criteria for this organism. Levels exceeding 100 CFU/gm are unacceptable and indicate a level of contamination which may have introduced pathogens or that pathogens, if present in the food prior to processing, may have survived.

A2- 4.3 Pathogens

Coagulase-positive Staphylococci

Contamination of ready-to-eat foods with coagulase-positive staphylococci is largely as a result of human contact. Contamination should be minimised through good food handling practices and growth of the organism prevented through adequate temperature controls.

Unsatisfactory levels of coagulase-positive Staphylococci indicate that time/temperature abuse of a food is likely to have occurred following improper handling during food preparation. A test for enterotoxin, SET, may be appropriate where levels of coagulase positive staphylococci exceed 10³ CFU/gm per gram or where poor handling practices are suspected but it is likely that viable organisms may no longer be present in significant numbers. Levels of ≥10⁴ CFU/gm are considered as potentially hazardous as foods with this level of contamination may result in food borne illness if consumed.

Clostridium Perfringens

Unsatisfactory levels of *C. perfringens* generally occur as a result of temperature abuse where cooked foods are held at warm temperatures (<60 °C, particularly room temperature) for extended periods of time or cooled (to 5 °C or below) too slowly*. Foods associated with foodborne illness caused by *C. perfringens* include joints of meat (especially large and rolled joints) and meat and vegetable dishes such as stews and pies. The detection of high levels (>10³ cfu per gram) of *C. perfringens* should result in an investigation of the food handling controls used by the food business. Levels of ≥10⁴ cfu per gram are considered as potentially hazardous as consumption of foods with this level of contamination may result in food borne illness.

Bacillus cereus and other Bacillus spp

An unsatisfactory level of *B. cereus* in cooked foods generally occurs as a result of inadequate temperature control. As for *C. perfringens*, cooked foods should be held at or above 60°C or at or below 5°C to prevent growth or held outside this temperature range for a limited time. Foods associated with *B. cereus* food poisoning include cooked rice dishes, other cereal based foods such as pasta/noodles, dairy based deserts and meat or vegetable dishes incorporating spices. The detection of high levels (>10³ cfu per gram) of *B. cereus* should result in an investigation of the food handling controls used by the food business. Levels of ≥10⁴ cfu per gram are considered potentially hazardous as consumption foods with this level of contamination may result in food borne illness. Other *Bacillus* species, such as *B. subtilis* and *B. licheniformis*, have also been associated with food borne illness and may also be tested for.

Vibrio parahaemolyticus

Testing for *V. parahaemolyticus* is relevant to seafoods only. High levels of *V. parahaemolyticus* (>10² CFU/gm) in cooked seafoods indicates that the food has been inadequately cooked or cross-contaminated after cooking with subsequent time/temperature abuse and should result in an investigation of the food handling controls used by the food business. Higher levels (up to 10² CFU/gm) of *V. parahaemolyticus* in raw seafoods may be expected because of natural contamination from the aquatic environment, however levels from 10³ to 10⁴ CFU/gm in raw seafoods would indicate inadequate temperature controls since harvesting and should be considered as unsatisfactory.

Campylobacter

Campylobacter should not be present in ready-to-eat foods as consumption of food containing this pathogen may result in food borne illness. The detection of *campylobacter* indicates poor food handling controls, particularly cross contamination (especially where raw poultry is handled) or inadequate cooking (e.g. raw or undercooked meat and poultry). The use of raw milk or of contaminated water may be alternative sources of *Campylobacter* that should be considered.

Salmonella Spp.

Ready-to-eat foods should be free of *Salmonella* as consumption of food containing this pathogen may result in food borne illness. The presence of this organism indicates poor food preparation and handling practices such as inadequate cooking or cross contamination.

Consideration may also be given to investigating the health status of food handlers on the premises who may have been suffering from salmonellosis or asymptomatic carriers of the organism.

Listeria monocytogenes

Listeria monocytogenes is widespread in the environment and can be isolated from a wide variety of foods. Its detection in ready-to-eat foods which have not undergone a listericidal treatment, therefore, does not immediately indicate a problem with food practices within the food establishment. Higher levels of *L. monocytogenes* (10² CFU per gram), however, do indicate a failure with food handling controls and based on current epidemiological evidence are considered a public health risk. Foods in which all components have been cooked in the final food preparation, or have received some other listericidal treatment, should be *Listeria* free. The detection of *L. monocytogenes* in such foods indicates the food was inadequately cooked or the food was contaminated post preparation. Additionally, the detection of *L. monocytogenes* in foods which have been prepared specifically for “at risk” population groups such as the elderly, immunocompromised and infants should be considered as potentially hazardous.

The risk posed by *L. monocytogenes* is dependent on the food and how long it is stored. Prior to interpreting results (Table 1), the food should be categorised as follows:

Food Group 1 – ready-to-eat foods that will support the growth of *L. monocytogenes* and has been stored prepared for greater than one day (e.g. packaged sandwiches), or

Food Group 2 – ready-to-eat food that will not support the growth of *L. monocytogenes* and has been stored prepared for greater than one day (e.g. salads and dips with a low pH), or

Food Group 3 – ready-to-eat food that will be consumed immediately and has not been stored prepared for greater than one day (e.g. freshly made sushi).

A2- 5 Categories of Microbiological Quality

Four categories of microbiological quality have been assigned based on aerobic colony counts, levels of indicator organisms and the number or presence of pathogens. These are satisfactory, marginal, unsatisfactory and potentially hazardous.

Satisfactory: results indicate good microbiological quality.

No action required.

Acceptable: results are borderline in that they are within limits of acceptable microbiological quality but may indicate possible hygiene problems in the preparation of the food.

Action: Re-sampling may be appropriate. Premises that regularly yield borderline results should have their food handling controls investigated.

Unsatisfactory: results are outside of acceptable microbiological limits and are indicative of poor hygiene or food handling practices.

Action: Further sampling, including the sampling of other foods from the food premise may be required and an investigation undertaken to determine whether food handling controls and hygiene practices are adequate.

Unacceptable: the levels in this range may cause food borne illness and immediate remedial action should be initiated.

Action: Consideration should be given to the withdrawal of any of the food still available for sale or distribution and, if applicable, recall action may be indicated. An investigation of food production or handling practices should be instigated to determine the source/cause of the problem so that remedial actions can commence.

A2- 6 Follow-up Action in the Event of Unsatisfactory & Unacceptable Results

In the event of an unsatisfactory result for either a process hygiene or a food safety criterion, food business operators must take specific actions. Such actions must include but not limited to:

- taking measures to find the cause of the unsatisfactory result in order to prevent recurrence.
- taking any other corrective actions defined in your HACCP-based procedures and any other actions necessary to protect the health of consumers.
- withdrawing or recalling the foodstuff from the market in accordance with the requirements of the Food Code or any other relevant legal requirement or if the product is on the market but has not reached retail level, the product be submitted to further processing to eliminate the hazard.
- take measures to find the cause of the unsatisfactory result in order to prevent recurrence.
- take any other corrective actions defined in the HACCP-based procedures and any other actions necessary to protect the health of consumers.

Table – 1 *Microbiological Limits for Assessment of Microbiological Quality of Ready-to-Eat Foods*

Criterion		Microbiological quality			
		Colony-Forming Unit (CFU) per gram unless specified			
		Class A Satisfactory	Class B Acceptable	Class C Unsatisfactory	Class D Unacceptable
Aerobic Colony Count (ACC) [30°C/48hours]					
	Level 1	< 10 ⁴	10 ⁴ – < 10 ⁵	≥ 10 ⁵	N/A
	Level 2	< 10 ⁶	10 ⁶ – < 10 ⁷	≥ 10 ⁷	N/A
	Level 3	N/A	N/A	N/A	N/A
Indicator organisms (apply to all food categories)					
<i>E. Coli</i> (total)		< 20	20 – < 100	≥ 100	N/A
<i>Enterobacteriaceae</i> *		< 10 ²	10 ² – 10 ⁴	≥ 10 ⁴	
Pathogens (apply to all food categories)					
<i>Campylobacter</i> spp.		Not detected in 25g	N/A	N/A	Present in 25g
<i>E. Coli</i> O157		Not detected in 25g	N/A	N/A	Present in 25g
<i>L. Monocytogenes</i>		Not detected in 25g	N/A	N/A	Present in 25g
<i>Salmonella</i> spp.		Not detected in 25g	N/A	N/A	Present in 25g
<i>V. Cholerae</i>		Not detected in 25g	N/A	N/A	Present in 25g
<i>V. Parahaemolyticus</i>		< 20	20 – < 100	100 – < 10 ³	≥ 10 ³
<i>S. Aureus</i>		< 20	20 – < 100	100 – < 10 ⁴	≥ 10 ⁴
<i>C. Perfringens</i>		< 20	20 – < 100	100 – < 10 ⁴	≥ 10 ⁴
<i>B. Cereus</i>		< 10 ²	10 ² – < 10 ³	10 ³ – < 10 ⁴	≥ 10 ⁴

N/A denotes “Not applicable”

Table – 2 *Food Category Table for Aerobic Colony Count Assessment*

Food group	Food item	Level
Meat	Beef burgers and kebabs	1
	Dim sum	1
	Pate (meat, seafood or vegetable)	2
	Cooked Poultry (unsliced)	2
	Preserved meat	3
	Salami and fermented meat products	3
	Sausages	1
	Smoked meat	2
	Sliced meat (ham and tongue) (cold)	2
	Sliced meat (beef, poultry, etc.) (dried)	2
	Steak and kidney / meat pies	1
	Roasted Meat sold in retail	1
Seafood	Crustaceans	2
	Pickled fish	1
	Other fish (cooked)	1
	Oysters (raw)	3
	Seafood meals	1
	Shellfish (cooked)	1
	Smoked fish	2
Dessert	Cakes, pastries, slices and desserts – with dairy cream	2
	Cakes, pastries, slices and desserts – without dairy cream	
	Cheesecake	1
	Mousse / dessert	2
	Tarts, flans and pies	1
	Milk sweets	2
		2
Savoury	Bean curd	2
	Cheese-based bakery products	1
	Fermented foods	3
	Flan / quiche	1
	Dips	2
	Mayonnaise / dressings	1
	Samosa	1

	Satay	2
Vegetable	Coleslaw / salads (with or without meat)	2
	Fruit and vegetables (dried)	2
	Fruit and vegetables (fresh)	3
	Rice	1
	Vegetables and vegetable meals (cooked)	1
Dairy	Cheese	1
	Ice-cream (dairy and non-dairy)	1
	Ice lollies / sorbet	1
	Yoghurt / frozen yoghurt (natural)	3
Food group	Food item	Level
Ready-to-eat meals	Pasta / pizza	1
	Fully cooked Meals (others)	1
Sandwiches	With salad	3
Sandwiches	Without salad	2
Filled rolls		1
Sushi & sashimi	Fish fillet and fish roe sashimi / sushi	2

Annex 3 – Requirements Pertaining to Implementation of Food Safety Management System

A- 3.1 Introduction

Local order No:11, 2003 from Dubai Municipality requires all food establishments to implement and maintain a risk based food safety management system. This annex specifies the requirements for the implementation of food safety management system in Dubai and addresses the roles, responsibilities and requirements of all stakeholders.

Requirements of this annex are generic it is applicable to all organizations in the food chain, regardless of size and complexity. Organizations that are directly or indirectly involved include, but are not limited to food manufacturers, retailers, food services, catering services, cleaning and sanitation services, transportation, storage and distribution services, primary producers, farms, aqua and hydroponic farms, suppliers of equipment, cleaning and disinfectants, packaging materials and other food contact materials, and primary producers.

A-3.2 Objectives

- Facilitate the implementation of HACCP based food safety management system.
- Ensure competence of individuals involved in the audit process.
- Ensure standardisation, comparability and transparency throughout the entire supply chain from primary production to sale or consumption.
- Provide guidance food establishments and certification bodies
- Ensure smooth transition from paper-based to digitalised management of food safety management system

A-3.3 Scope

The relevant clauses of this annex are applicable to the following types of organisations as specified. The businesses include:

- Food establishments operating in the Emirate of Dubai.
- Certification bodies that offer third party audit and certification for Food Safety Management systems in Dubai under the accreditation from EIAC
- Firms that offer consultation or training relevant to food safety management systems
- Firms that offer 'Second party' audits, where such audit reports are used as an evidence of compliance to food safety management system requirements of Dubai Municipality

This annex must also be used as a primary reference for developing and maintaining a food safety management system.

A-3.4 Reference Documents

The Annex is based on the following documents:

- Joint FAO/WHO Codex Alimentarius Commission, General Principles of Food Hygiene, CAC/RCP 1-1969, Rev. 4 (2009).
- Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for its Application, Annex to CAC/RCP 1-1969, Rev. 4 (2009).
- ISO 22000:2018, Food safety management systems - Requirements for any organization in the food chain.
- ISO/IEC 17021-1:2015, Conformity assessment — Requirements for bodies providing audit and certification of management systems.
- IFS, Standard for auditing quality and food safety of food products, Version 6.1.
- HACCP Certification Scheme concerning “The Requirements for a HACCP based Food Safety System”, Version 5.1 - June 2016.
- FSSC 22000 Version 5 – May 2019.

SECTION A - REQUIREMENTS FOR BODIES PROVIDING CERTIFICATION OF HACCP BASED FOOD SAFETY MANAGEMENT SYSTEM

A-3.5 Rules and Requirement Pertaining to Certification Bodies

- a. Certification Bodies that offer Food Safety Management System Certification shall be accredited by Emirates International Accreditation Centre (EIAC) based on ISO/IEC 17021-1 and ISO/TS 22003 standard. Certification bodies can be accredited for one or more categories as mentioned in Table 1 of this Annex.
- b. Certification bodies shall apply the requirements of ISO/IEC 17021-1 and ISO/TS 22003 for the schemes used for accreditation.
- c. Certification bodies shall only grant an ISO 22000 or HACCP based food safety management system certification to the food establishment only if there are no critical non-conformance remains open. All critical non-conformances must be closed before granting certification.
- d. Certification bodies shall have an online verification system in place for issued certificates. It shall provide name and location of client, scope of certification, date of certification/expiry and information related to expanding/reducing the scope of certification.
- e. Certification bodies shall provide the Food Safety Department with access to records and documentation related to certification activities when required.
- f. Certification bodies shall notify to Food Safety Department about the audit schedule for the establishment located in the Emirate of Dubai at least one week prior to the audit scheduled

date along with the management representative's name, auditor name, location and detailed audit plan.

- g. When necessary, the certification bodies shall take appropriate action to suspend or withdraw certifications based on the recommendations of the authorised officers from the Food Safety Department.
- h. Certification Bodies shall use multi-site sampling only for categories FSD-AI, FSD-AII, FSD-D, FSD-FI, FSD-FII, FSD-GI & FSD-GII (Table 1).
- i. Certification bodies shall document the audit time calculation including justifications for reduction or addition of time based on the minimum audit duration.
- j. Certification bodies shall take efforts to ensure that documents including digital records are verified on site. At least 75% of the calculated audit man- days must be used for onsite verification of both processes and documentation.
- k. Certification bodies shall conduct regular surveillance audit and the surveillance audit frequency depends on the type of organization as mentioned in Table 1 of this annex.
- l. The interval between stage I (pre-certification) and stage II (Certification) shall not be longer than 6 months.
- m. The certification body shall assess all the major food production sites, verify the effectiveness of control measures for CCPs during the certification cycle.
- n. The certification body shall perform at least 2 unannounced audits during the certification cycle after the initial certification audit and within each three (3) year period thereafter. Blackout days may be agreed in advance between the certification body and the food establishment.
- o. When required by the food establishment or the concerned authorities, the certification body shall conduct unannounced surveillance audits. However, certification audit shall not be performed unannounced.
- p. When announced audits are required, certification bodies shall not notify the date nor share the audit plan with the food establishment until the opening meeting.
- q. The auditor shall start the audit with an inspection of the production facilities commencing within 1 hour after he/she has arrived on site.
- r. The Certification body shall decide which of the surveillance audits shall be chosen for the unannounced audit.
- s. The certification body shall withdraw the certificate, if the food establishment refuses to participate in the unannounced audit.

SECTION B - REQUIREMENTS RELATED TO HACCP BASED FOOD SAFETY MANAGEMENT SYSTEM

A-3.6 Management responsibility

The management of the establishment is accountable for the safety of the products manufactured, processed or handled in their facility. The management of the establishment shall ensure that relevant regulatory requirements are implemented effectively through:

- allocation of adequate resources
- implementing food safety control measures
- management of suppliers and service providers
- ensuring competency of employees
- promoting a good food safety culture

A-3.6.1 Policy

- a. Top management shall define, document and implement a food safety policy that outlines:
 - Commitment of the organization to provide safe food.
 - Position of the organization in the food chain.
 - Procedure used to comply the customer and regulatory requirements.
 - Commitment to continually improvement of its food safety management system; and
 - Supported by measurable objectives.
- b. Management shall communicate, implement and maintain the food safety policy at all levels of the organization & shall verify the implementation & suitability of the policy periodically and review the outcome.

A-3.6.2 Responsibility and authority

- a. Top management shall ensure that the responsibilities & authorities of the staff involve in handling food and/or controlling and ensuring the safety and suitability of the food are clearly defined & communicated within the organization.

- b. Where the support of an external expert is required for the development, implementation or review of the system; a written agreement shall be included in which the responsibilities and authorities of the external expert are described.

A-3.6.3 Assemble Food Safety Team

- a. Establishment management shall assemble a Food Safety Team comprises of member with multi-disciplinary knowledge and experience in developing, implementing & maintaining the food safety management system.
- b. Management shall define and document the minimum qualification criteria, including required expertise for all team members.
- c. The team shall have adequate knowledge about food safety hazards & HACCP principles.
- d. Top management shall also appoint a Food Safety Team leader.
- e. Food Safety Team Leader shall have in-depth knowledge of HACCP and able to demonstrate competence in implementing food safety management system.
- f. Food Safety Team Leader shall be responsible and be authorized to manage the team, determine the need of trainings, ensure that the system is established, implemented, maintained and updated.

A-3.6.4 Resource management

- a. The management of the establishment that implements food safety management system shall provide adequate resource to Food Safety Team in a timely manner to develop, implement and maintain the HACCP based food safety management system.
- b. Management of the establishment shall provide adequate resources to:
 - Provide appropriate infrastructure & work environment needed for the implementation of the system requirements.
 - Recruit competent staff with appropriate education, training, skills and experience for effective development, implementation & continuous improvement of system.
 - Provide necessary training to ensure personnel have the necessary competencies.

A-3.7 Product Description

- a. The food safety team shall fully specify and document the description of each product
- b. This specification shall clearly define the following:
 - Product name & general product description.
 - Biological, chemical and physical characteristics relevant to food safety.

- Product specifications (like shelf life, storage conditions, labelling requirement, appearance, weight, allergen information, packing material etc.).
 - Method of production.
 - Transportation methods.
 - Preparation and/or handling before use or processing.
 - Acceptance criteria or specifications.
- c. The food safety team shall also identify statutory and regulatory food safety requirements related to the above.

A-3.8 Identify Intended and Unintended Use

- a. The intended use shall be defined based on the expected use of the product by the intermediate as well as the end user of the product.
- b. The food safety team shall identify and document the consumer group of each product /process. This should include:
- target consumer groups,
 - the potential for consumption of the population such as babies and children, pregnant women, elderly people, allergenic or sick people,
 - requirements for further processing, if applicable,
 - potential alternative use of the product.
- c. The food safety team shall review and document the intended use of the product periodically. The review must be done when there is a change in recipe, new legislations or when new risks are identified.
- d. Any unintended but reasonably expected mishandling and misuse of the end-product shall be considered and documented. The information must be provided to the customer when necessary.

A-3.9 Flow Diagrams

- a. The Food Safety Team shall prepare a clear, accurate, sufficiently detailed flow diagram of the products/processes. Flow diagram shall include all steps in the operation in a sequence with details of raw materials; intermediate products; end products; by-products and waste release; description of outsourced processes; and rework and recycling.
- b. The flow diagram shall be clear and complete enough so that people unfamiliar with the process can quickly comprehend the processing stages.

Note: The flow diagram should clearly list the process step (e.g. Cooking of meat to 75 C)) and not limited to the name of the process (e.g. Cooking).

A- 3.10 Verification of flow diagram

- a. The Food Safety Team shall conduct the onsite verification of flow diagram. Upon completion of the process flow diagram (PFD), members of the team shall visit the processing area to verify the flow diagram. This is known as "walking the line" a step by step practice to check that all information regarding materials, equipment, controls etc. have been taken into consideration during the preparation of the process flow diagram. Aspects such as time of production, deviations caused by different shift patterns, start-up, shut down, cleaning and especially night shifts shall be considered.
- b. The verifications shall be conducted annually or when there are any changes in the ingredient, product, process, equipment or the lay out in order to timely identify and document the changes/modifications of the process and assess risks to the safety of the food.
- c. Records of all such activities shall be maintained.

A-3.11 Hazard Identification and Analysis

The Food Safety Team shall identify, analyse and evaluate all hazards that may be reasonably expected to occur. Team shall document all the relevant records & documents.

3.11.1 Hazard identification

- a. The Food Safety Team shall identify the reasonably expected to occur hazards (biological, chemical and physical) that exist in the flow of food (include all products, processes and the pre-requisite program). The identification of reasonably expected to occur hazards shall be based on but not limited to:
 - Information related to characteristics of raw material and end products (product specifications),
 - Intended use of the product,
 - Raw materials and ingredients,
 - Process control within the chain,
 - Characteristics of all used processes, including subcontracted services, etc.,
 - External information such as scientific/epidemiological data, etc.,
 - Sequence of the steps,
 - Information related to process equipment, utilities/services and surroundings.
- b. The Food Safety Team shall determine & record acceptable level of all the identified hazards in the end-product. Statutory, regulatory & customer requirements and intended use shall be considered while deciding the acceptable level of hazards.

A-3.11.2 Hazard Analysis

- a. The Food Safety Team shall conduct a hazard analysis for every hazard, to identify the hazards which shall be eliminated or reduced to an acceptable level to produce safe food.
- b. The Food Safety Team shall determine & record the appropriate control measures or combination of control measures necessary to prevent, eliminate or reduce identified food safety hazards to acceptable levels. Team shall consider the statutory, regulatory & customer requirements and intended use of the product while deciding the control measures.
- c. The Food Safety Team shall document the methodology and the outcome of the hazard analysis.
- d. In case no control measure exists, the Food Safety Team shall modify the product or process at that step, or at any earlier or later stage, to include an appropriate control measure.

A-3.12 Establishing the HACCP plan

The Food Safety Team shall include following information in the HACCP plan:

- Detail of CCP
- Hazard to be controlled
- Identified control measure (s)
- Critical limit for each CCP
- Monitoring and measuring procedure
- Corrective actions
- Verification procedure
- Responsibilities
- Records.

A-3.13 Determination of CCP

- a. The Food Safety Team shall assess each control measure & identify the CCP intended to prevent eliminate or reduce these hazards to an acceptable level. Food Safety Team may require more than one control measure to control a hazard or may control more than one hazards by a single control measure.
- b. The identification of a CCP in the HACCP based Food Safety Management System can be facilitated by the application of a decision tree or any similar methodology. Application of such methodologies is helpful to determine whether the step is a CCP for the identified hazard.
- c. The Food Safety Team shall document the methodology and the outcome of this step.

A-3.13.1 Critical Limits for each CCP

- a. The Food Safety Team shall define appropriate & measurable critical limit for each CCP. These critical limits provide the baseline for measuring the effectiveness of food safety procedures.
- b. The Food Safety Team shall also validate the critical limits to ensure that critical limits effectively provide the level of control required.
- c. The Food Safety Team shall use research/scientific literature, international or local standards, scientific studies, expert guidance to determine the appropriate critical limits.
- d. The Food Safety Team shall document the methodology and rationale for the chosen critical limits. Critical limits based on subjective data (such as visual inspection of product, process, handling, etc.) shall be supported by instructions or specifications and/or education and training.

A-3.14 Monitoring and measuring procedure

- a. The Food Safety Team shall establish a monitoring procedure to ensure if the critical limits are being met and CCP is in control.
- b. The monitoring procedure shall include but not limited to critical limit of the CCP, monitoring methodology, monitoring frequency, devices used, its calibration detail, person responsible for monitoring & evaluation of monitoring records/results.
- c. Monitoring interval shall be reliable enough to ensure the hazard is being controlled & shall be done at a frequency proportional to the degree of consumer risk involved.
- d. Monitoring procedure shall be simple & easy to follow.
- e. Results of the monitoring such as monitoring reports, Non-Conformance Report, Corrective Action Report, etc. shall be recorded to ensure the CCPs are being monitored on a regular basis.

A-3.15 Corrective actions

- a. The Food Safety Team shall develop, document & implement an appropriate correction & corrective action procedure whenever a critical limit is not met.
- b. The Food Safety Team shall document the corrective actions to be taken in case the critical limit is exceeded for CCP. The procedure shall also include the process to investigate the cause of the deviation.
- c. Documented procedures shall also include appropriate handling of potentially unsafe products & procedure to release such product.
- d. The Food Safety Team shall conduct a root cause analysis to identify the cause of non-conformance and eliminate the root cause to prevent the recurrence.

- e. A documented justification for the corrective action to be taken shall be available, including the responsibilities and authorities of the personnel involved.

A-3.16 Verification of HACCP Based Food Safety Management System

- a. The Food Safety Team shall establish, document and implement procedures for verification of the HACCP based food safety management system. Verification shall be conducted to:
 - ensure the adequacy of HACCP plan & PRPs to control the hazards identified as likely to occur,
 - confirm that the implemented system meets the planned arrangements and the HACCP based food safety management system requirements established by the organization,
 - verify the need for updating or improving the system,
 - identify trends which indicate a higher incidence of potentially unsafe products,
 - verify the effective implementation of corrections and corrective actions taken by the food establishment.
- b. Documented verification procedure shall include purpose, method, responsibilities, frequency & detail of the records.
- c. Verification results shall be recorded and shall be communicated to the Food Safety Team.

Ongoing verification

- d. Ongoing verification shall occur at a frequency that can ensure the HACCP plan is being followed continuously. On-going verification activities shall include:
 - Observing the person doing the monitoring (e.g. is monitoring being done as planned?)
 - Reviewing the monitoring record (e.g. Are records completed accurately?, Do records show that the predetermined frequency of the monitoring is followed?, Was the planned corrective action taken when the person monitoring found & recorded that the critical limit was not met? and do records of the calibration of monitoring equipment indicate that the equipment was operating properly?)

System verification

- e. System verification helps the operator to:
 - Ensure the HACCP based food safety management system is implemented & the HACCP plan is being followed
 - Improve the system & HACCP plan by identifying weaknesses
 - Eliminate unnecessary or ineffective controls
 - Determine if the HACCP plan needs to be modified or updated.

f. HACCP based food safety management system verification shall be conducted less frequently (e.g., yearly) than on-going verification. It shall be planned to determine if:

- Any new product/processes/menu items have been added to the menu,
- Suppliers, customers, equipment, or facilities have been changed,
- The SOPs are current & implemented,
- The worksheets are still current,
- The CCPs are still correct, or if new CCPs are needed,
- The critical limits are set realistically & are adequate to control the hazard,
- Monitoring equipment has been calibrated as planned.

Verification results shall be recorded and shall be communicated to the Food Safety Team.

A-3.17 Internal audit

- a. The Food establishment shall conduct regular internal audit to measure its effective implementation and to determine whether the system conforms:
 - with the planned arrangements
 - with the requirements of the Annex
 - with the requirements of customer;
- b. Food establishment shall develop, implement & maintain an internal audit plan based on the product/process type, areas to be audited as well as the results of previous audits.
- c. The audit plan shall include audit criteria, scope, frequency and methods.
- d. Food establishment shall consider objectivity and impartiality of the audit process while selecting auditors.
- e. The documented internal audit procedure shall include the roles & responsibilities and requirements for:
 - planning and conducting audits
 - reporting results and
 - maintaining records.

A-3.18 Evaluation of Verification Activities

The Food Safety Team shall evaluate & analysis the results of all verification activities i.e. ongoing verification, internal audit, external audit etc. If the evaluation & analysis of verification activities shows deviation from planned arrangement, then the organization shall take following actions to achieve the required conformity:

- Review of existing SOPs & its communication to all levels
- Review of Hazards identification, Hazard analysis, PRPs & HACCP plan
- Review the effectiveness of training activities.

A-3.19 Management Review

- a. Management shall review the Food Safety Management System at planned intervals to ensure continuing suitability, adequacy and effectiveness.
- b. The finding of Food Safety Management System verification, previous management review, internal, external audit and new circumstances or emergency situations that could affect the food safety, shall be used as input for this review.
- c. The review shall evaluate the need for changes to the HACCP system, including product safety, policy and objectives.
- d. The review shall provide evidence of the commitment to improve the HACCP system and its performance.
- e. Records of management reviews shall be maintained.

A- 3.20 Documentation and record keeping

- a. Efficient and accurate documentation and record-keeping is essential to implement and maintain an effective food safety management system. Documentation and record keeping must be digital as far as possible and paper-based records shall be maintained only when an alternative system is unavailable.
- b. Food establishment shall maintain document and records in order to ensure conformity with the requirements of this Annex and all applicable legislation and regulations. Documents and records shall cover all processes, procedures and control measures.
 - i. All documents and records shall accurately recorded on digital platform provided by the Food Safety Department. Where the option to record the data in digital format is not available, such data must be recorded manually.
 - ii. Establishment shall have a documented procedure for the control of documents and records. All the amendments and their reasons shall be documented.
 - iii. Documentation should be appropriate to the nature and size of operation.

A-3.21 Validation

Validation is an essential part of food safety management system. The objective of validation is to ensure that the hazards identified by the Food Safety Team is accurate and the identified hazards will be effectively controlled and evaluated under the proposed plan. Validation also provide evidence that the selected specific control measures are suitable to control hazards and produce a safe product which meets all regulatory & customer requirements.

- a. The Food Safety Team shall validate the hazard identification, risk assessment & control measures or combination of control measures.

- b. The Food Safety Team shall validate the identified hazards & methodology used to assess the significance based on sound scientific data, knowledge or available local/international regulation/ technical requirements.
- c. Prior to implementation, the Food Safety Team shall also validate the control measures to ensure that these:
 - are effective and capable of achieving the intended control of the food safety hazard
 - can prevent the production of unsafe product &
 - are effective to obtain end products that meet all regulatory & customer requirements.
- d. The Food Safety Team shall review the system & update the validation of hazard identification, risk assessment & control measures whenever the organization introduces changes such as but is not limited to:
 - Change in control measures (i.e. process parameters, rigorousness and/or their combination)
 - Change in raw materials
 - Change in processes
 - Change in manufacturing technologies
 - Change in methods of distribution
 - Change in characteristics of the finished product or the intended use of the product.
- e. Records of validation shall be maintained.

A-3.22 Pre-requisite program

The food business operator shall establish, implement and maintain pre- requisite programs (PRP). PRP shall be well established (appropriately specified and documented), fully operational and integrated in the HACCP system, and be verified. The food establishment management shall also consider specific food safety requirements such as legislations in Dubai, UAE's national regulations and any regional or international standards and requirements.

The following requirements of the Food Code should be met:

- i. Establishment: design, layout, construction and facilities (all the requirement of clause 2.2 to 2.21 of this Code)
- ii. Control of operation (all the requirement of clause 3.2 to 3.11 of this Code)
- iii. Maintenance, cleaning and sanitation (all the requirement of clause 4.1 to 4.2.6 & 4.5 of this Code)
- iv. Pest Control (all the requirement of clause 4.3 to 4.4 of this Code)
- v. Personal hygiene (all the requirement of clause 5 of this Code)
- vi. Product information (all the requirement of clause 3.2.3.2 & 8.1 & 8.2 of this Code)

- vii. Training (all the requirement of clause 6 of this Code)
- viii. Product Traceability and Recall (all the requirement of clause 8.8 of this Code)
- ix. Approved suppliers (all the requirement of clause 3.2.2 of this Code)
- x. Emergency preparedness plan (all the requirement of clause 8.10 of this Code)
- xi. Food fraud (all the requirement of clause 8.13 of this Code)
- xii. Management of allergen (all the requirement of clause 3.6 of this Code)
- xiii. Waste management (all the requirement of clause 2.14 & 2.15 of this Code)

Section C- Rules and Requirements Pertaining to Auditors of Food Safety Management System

A-3.23 General Requirements

- a. Certification Bodies shall have adequate competent personnel for the specific tasks and responsibilities mentioned in this Annex.
- b. Certification Bodies shall only use auditors and technical experts (including external auditors and external technical experts) approved by the Food Safety Department.
- c. The auditor shall be a full-time employee in a certification body accredited by Emirates International Accreditation Centre (EIAC).
- d. Certification bodies shall monitor the continuous professional development of auditors.

A-3.24 Requirements for Approval of Auditors, Consultants and Trainers

- a. Auditors, consultants and trainers who offer food safety management system related services must be registered as a Technical Expert on Foodwatch platform of Dubai Municipality.
- b. Auditors, consultants and trainers who offer services to food businesses must meet the requirements specified for Technical Experts as per Annex 4 for Food Code.

A-3.25 Requirements for Qualification, Experience and Knowledge

Auditor shall demonstrate that he/she has the relevant qualifications, knowledge, experience, and skills in food safety and auditing field.

a. Food Safety Qualification

Food Safety Management System auditors, consultants and trainers shall meet the food safety qualification requirements of Food Safety Trainers as listed in Annex 4 of this code.

b. Food Safety Experience

Food Safety Management System auditors, consultants and trainers shall meet the food safety experience requirements of Food Safety Trainers as listed in Annex 4 of this code.

c. Auditing Experience and Qualifications

- i. Auditor shall successfully complete an accredited Food Safety Lead auditor course offered by accredited certification body.
- ii. A minimum of fifteen (15) complete accredited food safety audits (minimum 20 mandays) shall be completed as a lead auditor in different food companies in last one year.
- iii. Auditor should also have specific & practical knowledge related to product scope.

d. Continuing Professional Development (CPD) for Auditors

Food Safety Management System auditors, consultants and trainers shall meet the CPD requirements of Food Safety Trainers as listed in Annex 4 of this code.

A- 3.24 Requirements for Consultants and Trainers of Food Safety Management System

- a. Consultants who offer food establishments with consultancy in food safety management system shall obtain prior approval from the Food Safety Department as a consultant. The approval of the consultant will be limited to specific business activities based on the competency of the consultant.
- b. Trainers who offer qualifications related to Food Safety Management System implementation and/or Auditing require prior approval from the Food Safety Department. The trainer should meet the relevant requirements of Annex 4 of the Food Code.

Mandatory Audit Requirements (list of things that must be verified in all audits)

Table 1
List of Businesses that Require Mandatory Third-Party Certification

Category Code	Categories	Sub Categories	Example	Surveillance requirements (Minimum)
FSD-AI	Processing 1 - Farming of Animals including all activities after farming, e.g. slaughtering meat, poultry, eggs, dairy and fish products	Farming of Animals for Meat, poultry, eggs, dairy, honey	<i>Packing and storage of eggs</i>	Once every year if the Food inspection Grade is A, B or C, and Once every six months if the grade is C D or F
FSD-AII		Farming of Fish and Seafood	<i>Packing and storage of fish and seafood</i>	Once every year if the Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-BI	Processing 2 - Farming of Plants	Farming of Plants (other than grains and pulses)	<i>Packing and storage of fresh fruits and vegetables</i>	Once every year if the Food inspection Grade is A, B or C, and Once every six months if the grade is C D or F
FSD-BII		Farming of grains and pulses	<i>Packing and storage of grains and pulses</i>	Once every year if the

				Food inspection Grade is A, B or C, and Once every six months if the grade is C D or F
FSD-CI	Food Manufacturing	Processing of perishable animal products	<i>Production of seafood, meat, eggs, dairy and fish products</i>	Once every year if the Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-CII		Processing of perishable plant products	<i>Production of fruits and fresh juices, vegetables.</i>	Once every year if the Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-CIII		Processing of perishable animal and plant products	<i>Production of mixed animal and plant products including pizza, lasagne, sandwich, dumpling, ready to-eat meals</i>	Once every year if the Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-CIV		Processing of ambient stable	<i>Production of food products from any</i>	Once every year if the

		products	<i>source that are stored and sold at ambient temperature like canned products; biscuits; snacks; etc.</i>	Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-D1	Hotels	Food service operations		Once every year if the Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-D2	Catering Facilities and Central Processing Units			Once every year if the Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-FI	Trading and Distribution	Trading and Distribution of highly perishable and high risk food products	<i>Provision of perishable food products such as poultry and meat, egg, cut fruits and vegetables, vacuum packed foods, juices and beverages that require temperature control.</i>	Once every year if the Food inspection Grade is A or B, and Once every six months if the grade is C, D or F
FSD-FII		Trading and Distribution of non-	<i>Trading of foods that are stored at ambient</i>	Once every year if the

		perishables and low risk foods	<i>temperature.</i>	Food inspection Grade is A, B or C, and Once every six months if the grade is D or F
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Table 2
Scoring Food Safety Management System Compliance Requirements

	FSMS COMPLIANCE SCORES FOR FOOD SAFETY		
Group	FSMS: Foodwatch Protect Implementation	FSMS: Foodwatch Protect Certification (second party)	FSMS: Certification (Third party)
Food establishments in Table 4	10%	10%	80%
Restaurants with Catering activity	10 %	10%	80 %
Catering Facilities, Central Kitchen Facilities, Central Processing Units	10 %	10%	80 %
Departmental Stores	10 %	10%	80 %
Restaurants with complex meal processes (Cook-chill) that offer food to more than 1000 customers per day, Restaurants that prepare and serve raw or partially cooked animal foods	25 %	25 %	50%
Restaurants that serve to less than 1000 customers per	50%	40 %	10%

day, Café/Coffee/Coffee Shop/Cafeteria, Supermarkets with food processing/Kiosks			
Public Cook/Party Cook	50%	40 %	10%
Food Retail – Groceries/Mini- stores	100%		
Temporary Food Facilities/Events	100%		
<p><i>Note: The scores are cumulative in nature. Certification to Foodwatch Protect is a mandatory requirement that is necessary to apply for Food Safety Management System Certification.</i></p> <p><i>Foodwatch Protect Certification would require a second party confirmation that the food safety management system has been implemented.</i></p>			

Table 3
Foodwatch- Compliance Criteria

The following criteria must be met to obtain Foodwatch Protect Certification

REGISTRATION AND DATA REQUIREMENTS
The profile of the food establishment must be complete with the following data.
License information, location and contact details up to date
All business activities are declared
All food preparation areas are listed
All food equipment are listed
All food transportation vehicles are listed
All food handlers are listed
All PICs are registered and listed
All foods are listed
All food ingredients are listed
All suppliers and contractors are listed
VERIFICATION REQUIREMENTS
The PIC must use the Foodwatch platform and the Foodwatch Connect app to manage the following:
Verify and report illness of food handlers
Food handler's personal Hygiene: Plan, Do, Check and Act
Food Area Cleaning and Disinfection: Plan, Do, Check and Act
Equipment Cleaning and Maintenance: Plan, Do, Check and Act
Pest Management: Plan, Do, Check and Act, report incidents and action with Pest Contractor
Food Process Verification for cooking, cooling, freezing, hot and cold holding, acidification etc based on relevance
Food supplier management based on data
Food delivery management and reporting
Grease trap cleaning and management
Water tank cleaning and management
Training of food handlers

Annex - 4

Requirements Pertaining to Food Safety and Nutrition Trainings

This Annex is aligned to the requirements listed under Section 6 of the Food Code and other relevant clauses of the Food Code that deals with training and competency of personnel working in food industry as well as in businesses that offer services to food establishments.

Definitions:

Training Company: The term 'Training Company' solely refers to establishments that are licensed to impart food safety training.

Training Centre: The term 'Training Centres' refers to all centres that provide training including the internal trainers employed by food business establishments.

Training Program refers to the set of specific training materials, methodologies and assessment designed and delivered to a target group. The main training programs referred to in this annex are:

- Person in Charge Training Program for personnel involved in managing or supervising food safety
- Person in Charge Training Program for Personnel involved in managing or supervising nutritional quality of foods in a food business
- Food Safety Management System or HACCP Training Programs
- Food Safety Training Program for food handlers
- Training Program for personnel involved in cleaning water tanks
- Training Program for Personnel involved in inspection of food transportation vehicles

Certification Body: Certification body refers to the organisations that are approved by the Food Safety Department and is accredited by Emirates International Accreditation Centre to provide specific qualifications to personnel working in the food industry.

A4- 1 Scope

The requirements listed in Annex A4 apply to all training programs mandated by the Food Safety Department of Dubai Municipality including the Person in Charge Certification program unless specified otherwise. Relevant sections of the annex applies to organizations such as the food establishments, service providers to food establishments, training centres, certification bodies who are involved in developing, delivering, assessing or certifying the programs.

A4-2 Responsibilities of Training Centres

Training centres, whether internal or external, are solely responsible for delivering food safety and nutrition training in Dubai. Following are the primary responsibilities of training centres.

- a. Training companies shall have a valid trade license with appropriate business activity that allows them to deliver food safety and nutrition related trainings in Dubai. Other activities on the license must not conflict with the scope of the training activity.
- b. Internal training centres shall have a valid permit from the Food Safety Department to provide training to staff members in a specific food business that employs the trainer. Internal trainers shall not train food handlers in organisations that are not a part of their approval.
- c. Training centres must have adequate systems and resources in place – including staff and, where appropriate, equipment, materials and software to support the delivery of the training programs. They must ensure that their staffs are competent with appropriate knowledge and skills.
- d. Training centres must employ at least one person with the knowledge, experience and skills that meet the criteria set out in section A4-3 of this annex.
- e. Prior to filing for the application for the approval of a new trainer, the management of the training centre must ensure that the applicant is:
 - Competent to plan and deliver the proposed trainings for which the approvals are required
 - Is able to communicate one's message effectively.
 - Capable of developing techniques to overcome barriers to learning.
 - Capable of providing encouragement and coaching during the training process.
- f. Training Centres are approved for a period of one year unless the approval is revoked earlier by the Food Safety Department.
- g. Training centres must use training materials that meets the requirements of the Food Safety Department. Where there are specific certification requirements, the training materials should meet the requirements of certification body such as in the case of PIC training program.

- h. Training centres shall provide the Food Safety Department with access to records and documentation regarding trainings. The department shall also have access to examination questions, assessment scripts (digital or paper-based), records of marking and any other relevant documents associated with the program.
- i. When the certification process is managed by an accredited certification body, the training centre shall provide all the necessary information to the certification body.
- j. Training centres shall ensure that the quality and integrity of the training, assessment and certification are not compromised.
- k. Training centres shall develop and maintain a Training Manual with the following details:
 - i. A short profile of the company
 - ii. Scope of activity of the company listing all training and consultation activities and any other scope of activity covered by the company
 - iii. List of all employees, with short description of their roles
 - iv. List the competencies that each employee is required to meet
 - v. List all the references that the employees are required to be knowledgeable about and how the references can be accessed.

A4-3 Requirements for Trainers

A4-3.1 General Requirements

- a. A food safety trainer requires prior approval from Food Safety Department to conduct any trainings regulated by the Food Safety Department.
- b. Trainer shall be a full-time employee in an establishment authorized and approved by the Food Safety Department to conduct food safety trainings. The trainer must also have relevant and legal work permit from the concerned authorities that allows the person to deliver training in Dubai.
- c. The trainer shall have:
 - the necessary knowledge, qualifications, experience required to provide the relevant training program;
 - comprehensive understanding of the Food Code, Food Standards relevant to UAE, Food Import requirements in Dubai and other relevant legal requirements;
 - comprehensive understanding on how to use the digital as well as non-digital food systems used to ensure compliance to regulations;
 - the necessary training skills to deliver the training program effectively.
- d. The trainer shall successfully complete the formal assessment conducted by the Food Safety Department essential to deliver specific training programs.

- e. The trainer shall deliver the training as required by the Department with focus on the training need(s) of the food establishment.
- f. The trainer registered online with any of Dubai Municipality's digital services shall not share their secure user access and credentials with anyone else. Sharing the user credentials in a way that compromises the security of the data will lead to immediate cancellation of the trainer's permit.
- g. The approval of the trainer will be cancelled if the trainer:
 - demonstrates insufficient knowledge or provides incorrect or misleading information to the trainees
 - fails to deliver the required training contents during the training
 - deliberately provides wrong information about the candidates
 - provide or aid in the provision of training certificates to candidates who are not eligible

A4-3.2 Qualification, Experience and Knowledge of Trainers

Trainers must demonstrate that they have the relevant qualifications, knowledge, experience, and skills in food safety and training. All documents provided to support this must be verifiable and evidenced with original documents when required.

A4-3.3 Food Safety Qualification

For approval as trainers, all new applicants must have:

- a. a verifiable Degree or post graduate Diploma that encompasses one or more of the following fields:
 - Food Science or Food Technology
 - Food Safety
 - Environmental and/or Public Health
 - Food Microbiology
 - Management in the hotel, catering, or retail sectors (with minimum 2 courses related to food science/food safety.
 - Microbiology or Biotechnology chemistry, agriculture (with minimum 2 courses related to food science/food safety)
- b. Trainer shall have formal qualifications in advanced food safety from qualification providers recognised by the Food Safety Department appropriate to the level of training offered.

A4-3.4 Food Safety Experience

For approval as trainers, all new applicants must have:

- a. At least five (5) years of experience in the field of food safety of which there should be at least three (3) years of food industry experience in managing or supervising food safety in a food establishment.
- b. Trainer shall provide verifiable evidence of work experience to the Food Safety Department.

Note: Applicants who have the sole experience of working in a training, consultancy or certification firm, or any other non-food business that supports the food industry must have additional 3 years of experience working in a food establishment.

A4-3.5 Training Qualifications

- a. Trainer must have essential language and training skills to communicate effectively.
- b. Trainers shall hold a formal qualification to deliver trainings. This could be:
 - i. Teachers training certificate, degree, diploma or certificate course on delivering training recognized by the Food Safety Department
 - ii. 'Train the trainer' course offered by a recognised qualification provider. Such course should be focused on enhancing training skills.

Note: PIC Train the Trainer course is not focused on enhancing training skills and thus cannot be used to meet the eligibility criteria for this requirement.

A4-3.6 Demonstration of Knowledge and Skills

- a. Trainers are required to demonstrate their training competency through both formal and informal assessment throughout the time they offer trainings.
- b. Where the Food Safety Department requires a specific assessment prior to issuing a training permit for a new training module, the trainer shall successfully complete the relevant assessment.

A4-3.7 Continuing Professional Development (CPD) for Trainers

Trainers should strive to continually update and improve their knowledge of issues and developments within the area of food safety and apply that knowledge for training. The objective of CPD is to maintain high standards of professionalism and to ensure that knowledge is translated into communication of best practice to the trainees. CPD contributes to three basic areas:

- maintenance of professional competence
- enhancement of existing knowledge and skills
- development of new knowledge and skills.

The CPD points for various programs can be obtained from any activity recognized by Food Safety Department and/or other regulatory bodies.

- a. To retain the approval to train, the trainer shall:
 - i. maintain a continuous, up-to-date and accurate record of their CPD activities on the Foodwatch platform.
 - ii. demonstrate that their CPD activities are a mixture of learning activities relevant to current or future practice (Ref to Table 4)
- b. trainer's approval will be revoked if the trainer is unable to submit the evidences of their CPD activities.

A4-3.8 CPD Activities

A trainer's CPD shall include activities in at least three of the following (Table 4):

- a. Food Safety work-based learning (e.g. attending formal training, workshops, conferences that offer advanced knowledge or competencies essential to improve the current capabilities) – Minimum 50% of CPD hours (15 hours)
- b. Professional activity (e.g. involvement in a food safety professional body, mentoring) - Minimum 20% of CPD hours (6 Hours)
- c. Formal education related to food safety or relevant fields (e.g. further/ higher education) - Minimum 20% of CPD hours (6 Hours)
- d. Self-directed learning (e.g. reviewing books / articles related food safety and/or relevant topics) - Minimum 20% of CPD hours (6 Hours)
- e. Other (e.g. voluntary work in food safety events) - Minimum 20% of CPD hours (6 Hours)

A4-3.9 Annual Requirements

The Food Safety Department requires a minimum of 30 hours CPD per annum for all trainers. The details of the CPD points along with the relevant documents should be submitted to the Food Safety Department in digital format.

Note: CPD activities should be separate from the trainings and qualifications that are a part of the basic requirements to be a trainer and the routine work of the trainer.

A4-4 Design, Delivery and Assessment of Training Programs

Training centres are responsible to deliver the training programs and assessment of the candidates knowledge post training.

A4-4.1 Training Materials

- a. Trainers shall use suitable and relevant training materials for provision of trainings
- b. The trainer shall only use the materials approved by the Food Safety Department.
- c. Where necessary, pre-course materials, videos must be provided to the trainees prior to the training.

A4-4.2 Course Plan

- a. The trainer shall use the Foodwatch platform to register and manage the trainee information in digital format. Registration must be done at least three working days prior to the start of training. For the PIC training program, registration must be done at least 5 working days prior to the start of the training.
- b. Any changes in the planned schedule shall be reported to the Food Safety Department immediately.
- c. The trainer should confirm the language of training and examination dates to the trainees during the registration process.
- d. Details of the training, location and any other necessary information shall be provided to the candidates at the time of registration.

A4-4.3 Training Room

- a. Training shall be conducted in rooms that are suitable and solely dedicated for that purpose of training.
- b. The room shall be as quiet as possible and free from any other activities that could distract trainees. Restaurant dining areas, storage areas and rooms that have activities that could distract the trainees shall not be used for training.
- c. Training rooms shall have adequate lighting and ventilation, and the type of seating should be suitable for the trainee's comfort. The number of candidates in a training and assessment shall not exceed 20. For the PIC training program, the trainee number shall not exceed 16.
- d. Trainees should be seated at separate desks that should normally be placed at a distance of not less than 1.25 meters apart (measured from the centre of the desk). The room shall have adequate facilities like AV equipment and stationary materials.
- e. There should be sufficient space between the trainees with a minimum distance of one meter between two people.

Note: Trainer shall as a part of registration of trainees confirm the training room via the digital platform. The suitability of training room must be verified by the trainer prior to confirming the location of the training.

A4-4.4 Selection and Delivery of Training

- a. Training centre should recommend to the management of the food establishment the relevant trainings applicable to a particular trainee. The training recommendation should be based on the competency requirements of the person as listed in table 1, the qualification requirements listed in table 2 and table 3 of this annex.
- b. Training centres shall provide the training through trainer-led lecture sessions.
- c. The training must be based on the qualification requirements of the trainee as listed in Table 1 and Table 2.
- d. The training contact time excluding the breaks shall be sufficient to meet the course plan of the relevant training program (Table 2).
- e. Trainer should consider expanding the number of contact hours when a review of the participants' reveal learning disabilities, language barriers or other communication factors that may affect learning.

A4-5 Dealing with Noncompliance

- a. Permits of Trainers and Training centres that do not meet the requirements listed in this annex will be cancelled with a formal notification from the Food Safety Department.
- b. Authorised officers from the Food Safety Department can discontinue training session immediately in case of any non-compliance including but not limited to unapproved trainer, unsuitable training room, or any other situation not meeting the program requirements.
- c. Training certificates and the digital equivalent of the certification issued under following circumstances will be considered as 'fraudulent' and legal measures will be initiated by Dubai Municipality:
 - (i) Issuing certificates to candidates who have not completed the training or assessment
 - (ii) Providing misleading information to Dubai Municipality, Certification Bodies, Food Establishments or Trainees.
 - (iii) Providing incorrect information deliberately to bypass the requirements for the Food Safety Department
 - (iv) Using trainers who are not approved

Note: In such cases, there could also be other legal actions based on the existing laws of the UAE.

A4-6 Feedback, Appeals and Complaints

- a. Training centres must take a post training survey to measure the satisfaction of all trainees. Data from the surveys must be shared with the Food Safety Department.
- b. The feedback from trainees must be used to modify the trainings if required in consultation with the Food Safety Department.
- c. Training centres shall have a documented procedure to handle appeals and complaints. Where necessary, such appeals and complaints must be notified to the Food Safety Department.

Table 1

Competency requirements of a Certified Person in Charge of Food Safety

Food Safety Responsibilities	<ul style="list-style-type: none">• The Primary Person in Charge of a Food Establishment should be able to outline the responsibilities of all relevant parties including business owners, persons in charge and food handlers with regards to food safety.• The PIC should be aware of the common contributing factors to foodborne illnesses in Dubai and be able to take adequate preventive measures.• The PIC should be aware of the responsibilities and procedures linked to reporting any case of foodborne illness (staff or customers) to the Food Safety Department.
Managing Food Safety	<ul style="list-style-type: none">• The PIC should be familiar with the managerial requirements relevant to food safety such as what approvals and permits are required to operate a food business, what systems have to be used, and how the systems have to be used.• The PIC should be able to use the relevant features of the Foodwatch platform to maintain approvals, permits, contracts, records and evidence of action.• The PIC should be able to report corrective actions, manage suppliers and deal with supplier non compliance.• The PIC should manage consumer complaints effectively and know when to report the complaints to Dubai Municipality.
Personal Hygiene	<ul style="list-style-type: none">• The PIC should be able to demonstrate good hygiene practices and promote high standards of personal hygiene among staff.• The PIC must be able to identify the signs and symptoms of foodborne illnesses and infections that could have an impact on food safety. The PIC should be aware of when to exclude ill employees from work or direct food handling responsibilities.
Food safety operational requirements	<ul style="list-style-type: none">• PIC should be capable to:<ul style="list-style-type: none">- Identify and report structural deficiencies in the food operation- Manage and maintain an effective pest control system- Manage and maintain a satisfactory waste disposal system

	<ul style="list-style-type: none"> - Identify suitable cleaners and disinfectants to be used in the business; and ensure they are used effectively • Where applicable to their job: <ul style="list-style-type: none"> - Ensure food safety during product purchasing - Ensure food safety during delivery receipt - Ensure food safety during storage - Ensure food safety during product preparation - Ensure food safety during cooking/processing/cooling/holding/service of food - Encourage good hygiene practices during the transportation of food - Ensure products are labelled correctly • Ensure the food safety training needs and competencies of staff are met • Use Foodwatch to carry out food safety checks and take action
Food Safety Management System (Additional competencies for PIC with Advanced Certification)	<ul style="list-style-type: none"> • Understand basic principles of establishing food safety management systems relevant to the scope of the activities of the food businesses • Manage and maintain food safety documentation and records relevant to food safety management systems • Manage and maintain the traceability system within the area of the food operation
Food Safety Management System (Additional competencies PIC's involved in catering of food to schools or in establishments that have nutritional or health claims)	<ul style="list-style-type: none"> • Understand the basic principles of nutrition. • Understand and apply the nutritional requirements for schools. • Understand how the Foodwatch platform can be used for nutrition calculation. • Understand basic principles of establishing food safety management systems relevant to the scope of the activities of the food businesses. • Manage and maintain food safety documentation and records relevant to food safety management systems. • Manage and maintain the traceability system within the area of the food operation.

Table 2
Learning Objectives for Food Safety Trainings

S. No	Module	Learning Objectives	Minimum Delivery Hours	Associated Qualification
1	Introduction to Food Safety	<ul style="list-style-type: none"> . Understand food safety and business operator/staff responsibilities with regard to food safety. . Understand the regulatory and legislative framework in Dubai . Understand disease surveillance data, common foodborne diseases in Dubai . Understand factors that commonly contribute to foodborne illness 	1 Hour	PIC- Recertification PIC – New PIC- Advanced
2	Pre-requisite Programs	<ul style="list-style-type: none"> . Understand the role of personal hygiene in preventing contamination and foodborne illness; . Identify the hygiene practices that employees should follow before reporting to work and while at work; . Understand how the design, layout, construction and maintenance of premises and equipment can affect food safety . Understand the implementation, management and application of good 	2 Hours	PIC- Recertification PIC – New PIC- Advanced

		<p>hygiene practices, cleaning, disinfection, waste disposal, and pest control</p> <ul style="list-style-type: none"> . Understand the procedures of supplier approval and stock control . Understand the concepts to assess training and competency needs of employees 		
<u>3</u>	Understand Hazards and Control Measures	<ul style="list-style-type: none"> . Understand microbial, chemical, physical hazards and allergens . Understand risk factors linked to these hazards and control measures . Explain methods for monitoring and recording food safety hazards . Determine the appropriate corrective actions required if food safety hazards are not controlled 	2 Hours	PIC- Recertification PIC – New PIC- Advanced
<u>4</u>	Managing Food Safety compliance	<ul style="list-style-type: none"> . Explain food business operator and staff responsibilities with regard to food safety legislation . Implement the requirements of food safety legislation and procedures for compliance and enforcement . Explain the food inspection system . Explain how to use the Foodwatch platform 	2 Hours	PIC- Recertification PIC – New PIC- Advanced

5	Food safety management System	<ul style="list-style-type: none"> . Explain the principles of HACCP . Understand the controls needed to protect the safety of food as relevant to the type and nature of the business . Manage microbial, physical, chemical and allergen food safety risks relevant to the type and nature of food business . Understand how to handle risks associated with raw or partially cooked ready to eat foods <ul style="list-style-type: none"> Manage and maintain food safety documentation and records via Foodwatch 	3 Hours additional module for Advanced Certification of Person in Charge of Food Safety in Food Service	PIC- Advanced
6	Food Nutrition – School Supplier (Optional but mandatory for suppliers to schools, food service businesses with nutritional claims)	<ul style="list-style-type: none"> . Understand the fundamental concepts in food and nutrition. . Understand the menu and recipe analysis and modification . Understand the local regulation related to school food and nutrition 	3 Hours	PIC- Advanced
7	Primary Qualifications	<ul style="list-style-type: none"> . Framework of Food Safety in Dubai . Food safety legislations in Dubai . Factors that contribute to foodborne illness as listed by the World Health Organization. 		Basic Food Safety Program- Level 1& Level 2

		<ul style="list-style-type: none"> . Common food safety issues in Dubai and the region, Surveillance data . Personal hygiene . Pest management (basic) . Cleaning and disinfection (basic) . Food Transportation . Food safety hazards (introduction) . Food safety control measures (basic from Food Code) Food inspection information . Foodwatch information . Responding to food related complaints and emergencies 		
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Table 3**Business Based Requirements for Person in-Charge**

The below table lists the training program, qualification and the number of PICs required in food business based on the type and nature of the food related activities in an establishment. **establishmen**

Business Type	PIC Requirement	Qualifications
Bakery/Confectionery Cat. I Meat, egg/cream/ milk based Products	One per shift present in the production area	Advanced PIC Certification
Bakery/Confectionery Cat. II Bread, chocolate, sweets, sugar confectionery	One per establishment	PIC Certification
Fishmonger/ Fish stall	One per establishment	PIC Certification
Butcher shop	One per establishment	PIC Certification
Fruit and Vegetables stall Raw whole vegetables only	One per establishment	PIC Certification
Grocery Pre-packed food only	One per establishment	PIC Certification
Departmental Store/Supermarket Cat. I Mixed activities, open display of open high-risk foods and preparing to order	One in each counter where open high-risk food is handled	Advanced PIC Certification
Departmental Store/ Supermarket Cat. II Pre-packaged food only	One per shift	Advanced PIC Certification
Vending Machine Requiring temperature control	One per license	License holder/manager with PIC Certification
Food kiosks Cat. I Confectionary	One per license	PIC Certification
Food kiosks Cat. II Cooked foods	One per kiosk	Advanced PIC Certification
Catering company Cat. I With preparation at service site	One per shift per kitchen (depends on the size)	Advanced PIC Certification
Catering company Cat. II	One per shift	Advanced PIC Certification

With only hot holding at service site		
Central Kitchens of restaurants or catering companies	One per shift per kitchen (depends on the size)	Advanced PIC Certification
Hospital kitchen	One per shift present in the production area	Advanced PIC Certification
Nursing Home	One per shift present in the production area	Advanced PIC Certification
Day Care, Pre-school, School Cat. I Production/preparation	One per shift present in the production area	Advanced PIC Certification and additional qualification with Nutrition Module
Day Care, Pre-school, School Cat. II Tea, coffee, snacks only	One per establishment	Advanced PIC Certification and additional qualification with Nutrition Module
Restaurant Cat. I Hot holding, Cooling, Reheating and serving meals	One per shift present in the kitchen	Advanced PIC Certification
Restaurant Cat. II Preparation and immediate service	One per shift present in the production area	Advanced PIC Certification
Cafeteria and café	One per shift present in the kitchen	Advanced PIC Certification
Hotels	One per shift present in each kitchen	Advanced PIC Certification
Manufacturing Plants	One per shift present in the production area	PIC Certification
Food Trading Companies	One per establishment	PIC Certification

Table 4 Continuing Professional Development (CPD) for Trainers, Consultants and Auditors

Example 1

Areas	Food Safety work-based learning	Professional Activity	Formal Education	Self-directed learning	Other
Examples	Attending formal training, workshops, conferences	Involvement in a food safety professional body, mentoring	Higher education- Diploma/Certificate//Degree	Reviewing books / articles related food safety and/or relevant topics	Voluntary work in food safety events
Minimum CPD Hours	15	6	6	6	6
Total 30 CPD hours (At least in 3 areas)					

Example 2

Areas	Food Safety work-based learning	Professional activity	Formal Education	Self-directed learning	Other
Train	Attended Dubai International Food Safety Conference	Not Applicable	Attended a approved Certificate or course in food safety	Reviewing books / articles related food safety and/or relevant topics	Voluntary work in food safety events (Dubai Municipality approved)
CPD Hours * of activities	18	NA	18	Na	6
Maximum CPD Hours (Trainer can claim)	15	NA	9	NA	6
Total 30 CPD hours (At least in 3 areas)					

**CPD hours listed above are not real numbers. The number of hours will depend on the learning hours you had for each of the programs you list.*

Annex 5 – Requirements for Layout and Design of Food Establishments

All food establishments in Dubai must have a valid trade license from concerned government authorities such as Dubai Economy Department, Dubai Creative Cluster Authority, Tarkhees, etc., before starting the operation.

A5-1 General Requirements for food establishments

The design and construction of food establishments shall be in a way that meets the requirements as mentioned in clause 2 of this Code.

A5-2 Specific requirement for different food activities

After getting initial approval from licensing authority, a layout shall be submitted to Dubai Municipality Food Safety Department with a detailed plan. This plan shall provide details of activities, areas and equipment as per below mentioned requirements:

	Requirement and Specifications	Restaurant	Cafeteria	Catering	Mobile Facilities	Baker (Bread only)	Small Bakery	Sweet shop	Grocery Store	Super market	Department al Stores	Butchery	Vegetable & Fruit Shop	Seafood Shop	Roastery
Area (sqft)	Minimum kitchen area	300	200	1000	NA	200	200	250	130	2000	7000	200	200	250	250
	<i>Additional area might be required based on quantity of food produced/processes</i>														
	Minimum Dining area (variable)	100	100		NA	NA	100	100							
Preparation Area	1. Meat Preparation 1 sink (L= 0.3 M x W = 0.5M x D = 0.3 M) Attached Preparation Table (L= 0.9 M x W = 0.5M)	M	M	M	M	NB-2				NB-2	M	M			
	2. Fish/Seafood Preparation 1 sink (L= 0.3 M x W = 0.5M x D = 0.3 M) Attached Preparation Table (L= 0.9 M x W = 0.5M)	NB-1	NB-1	NB-1	NB-1	NB-1				NB-1	NB-1	NA		M	
	3. Vegetables Preparation 2 sinks (L= 0.3 M x W = 0.5M x D = 0.3 M) Attached Preparation Table (L= 0.9 M x W = 0.5M)	M	M	M	M	NB-2				NB-2	NB-2	NA			
	4. Ready to Eat Food Preparation Prep Table (L= 1.2 M x W = 0.5 M)	M	M	M	M	NB-2				NB-2	NB-2	NA			
Cleaning	5. Dish wash Sinks (hot and cold-water supply) 3 Sinks (L= 0.6M X W= 0.5M X D= 0.5M)	M	M	M	M	N/A								M	
	6. Dish wash Sinks (hot and cold-water supply) 2 Sinks (L= 0.6M X W= 0.5M X	N/A	N/A	N/A	N/A	M				NB-2	NB-2		M		

	D= 0.5M)														
	7.Pot-wash Sink (hot and cold-water supply) 1 sink (L= 1.0 x W= 0.7 M x D=0.5 M)	M	NB-2	M	M	M	M								M
	8. Storage rack for dirty utensils	M	M	M	M	M									
	9. Storage rack for clean utensils	M	M	M	M	M	M	M							
	10. Chemical and Equipment Storage (Janitorial)	M	M	M	M	M									
	11. Mop wash sink with water supply	M	M	M	M	M									
Personal hygiene	12. Hand wash stations C-1	M	M	M	M	M	M	M		M	M	M		M	M
	13. Accessible hand wash station C-2	N/A	N/A	N/A	N/A	N/A			M				M		
	14. Personal Lockers for staff	M	M	M	M	M									
	15. Toilet C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3
Storage	16. Dry Food store/ Storage racks	M	M	M	M	M				M	M	NB-2			M
	17. Upright Refrigerator	M	M	M	M	NB-2	M	M	M	M	M	M	M	M	
	18. Upright Freezer	NB -2	NB -2	NB -2	NB -2	NB-2	M	M	M	M	M	NB-2	NB-2	NB-2	
	19. Chest Freeze C-4	C-4	C-4	C-4	C-4	C-4	C-4	C-4	C-4	C-4	C-4	N/A	N/A	N/A	
Display	20. Holding of Hot Food (Bain Marie/Steam Counter)	NB-2	NA	NB-2	NB-2	NB-2				NB-2	NB-2				
	21. Cold Holding Food	NB -2	NB	NB -2	NB -2	NB-2				NB-2	NB-2				
	22. Buffet / Display (Hot and Cold)	NB-2	N/A	NB-2	NB-2					NB-2	NB-2				
Others	23. Air conditioning (25C room temperature)	M	M	M	M	M	M	M	M	M	M	M	M	M	M
	24. Exhaust system	M	M	M	M	M									
	25. Ventilation hood	M	M	M	M	NB-2							NB-2		
	26. Blast Chiller when	NB-2	NB-2	NB-2	NB-2	NB-2									

	hot food is cooled													
	27. Transportation Equipment (Hot & cold)	NB-3	N/A	M	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3
	28. Tandoor oven	NB-4	N/A	NB-2	NB-2									
	29. Fly Trap	NB-5	NB-5	NB-5	NB-3	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5
	30. Grease Trap C5	M	M	M	M	M							M	
	31. Cooking Area	M	M	M	M	NB-2							M	
	32. Specific Requirements		C6						C7	C7	C7			C8

	Requirement and Specifications	Sweets, candies and confectionaries	Pastries Preparation	Fish shop	Fresh juice shop	Coffee shop	Repacking Facility	Ice cream shops	One star-two-three stars and hotel apartments	Bread, pastries, oriental sweets and bakery	Mini marts	Food and beverages trading company	Dried and Cold stores	Mills	School Canteen	Tea Stall Soft Drink
Area (SQFT)	Minimum kitchen area	250	100	200	100	150	200	100	130	2000	500	250	200	150	200	100
		Additional area might be required based on quantity of food produced/processes														
	Minimum Dining area (variable)	100	100		100	100		100		150					100	
Preparation Area	1. Meat Preparation 1 sink (L= 0.3 M x W = 0.5M x D = 0.3 M) Attached Preparation Table (L= 0.9 M x W = 0.5M)									NB-2	M	M				
	2. Fish/Seafood Preparation 1 sink (L= 0.3 M x W = 0.5M x D = 0.3 M) Attached Preparation Table (L= 0.9 M x W = 0.5M)			M						NB-1	NB-1	NA				
	3. Vegetables Preparation 2 sinks (L= 0.3 M x W = 0.5M x D = 0.3 M) Attached Preparation Table (L= 0.9 M x W = 0.5M)	M	M		M					NB-2	NB-2	NA				
	4. Ready to Eat Food Preparation Prep Table (L= 1.2 M x W = 0.5 M)	M	M		M	M				NB-2	NB-2	NA			M	M
Cleaning	5. Dish wash Sinks (hot and cold-water supply) 3 Sinks (L= 0.6M X W= 0.5M X D= 0.5M)	M	M	M	M	M	N/A	M							M	
	6. Dish wash Sinks (hot and cold-water supply) 2 Sinks (L= 0.6M X W= 0.5M X D= 0.5M)									NB-2	NB-2		M			M

	7. Pot-wash Sink (hot and cold-water supply) 1 sink (L= 1.0 x W= 0.7 M x D=0.5 M)	M	NB-2											M		NB-2
	8. Storage rack for dirty utensils	M	M	M		M										
	9. Storage rack for clean utensils	M	M	M	M	M										NB-2
	10. Chemical and Equipment Storage (Janitorial)	M	M	M	M	M	M									M
	11. Mop wash sink with water supply	M	M	M	M	M	M									M
Personal hygiene	12. Hand wash stations C-1	M	M	M	M	M	M	M		M	M	M		M	M	M
	13. Accessible hand wash station C-2	N/A	N/A	N/A	N/A	N/A			M				M			
	14. Personal Lockers for staff	M	M	M	M	M										
	15. Toilet C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3	C-3
Storage	16. Dry Food store/ Storage racks	M	M			M				M	M	NB-2		M		
	17. Upright Refrigerator	M	M	M	M	NB-2	M	M	M	M	M	M	M			M
	18. Upright Freezer	NB-2	NB-2	M		NB-2	M	M	M	M	M	NB-2	NB-2			
	19. Chest Freezer C-4	N/A	N/A				C-4	C-4	C-4	C-4	C-4	N/A	N/A		C-4	C-4
Display	20. Holding of Hot Food (Bain Marie/ Steam Counter)									NB-2	NB-2					
	21. Cold Holding Food	M	M		NB-2	NB-2				NB-2	NB-2					
	22. Buffet / Display (Hot and Cold)									NB-2	NB-2					NB-2
Others	23. Air conditioning (25C room temperature)	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
	24. Exhaust system	M	M	M		M										
	25. Ventilation hood	M	M	M		M							NB-2			

26. Blast Chiller when hot food is cooled	NB-2	NB-2													
27. Transportation Equipment (Hot & cold)						NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3	NB-3
28. Tandoor oven	N/A	N/A													
29. Fly Trap	NB-5	NB-5	NB-5	NB-3	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5	NB-5
30. Grease Trap C5	M	M	M		M								M		
31. Cooking Area	M	M			M								M		
32. Specific Requirements								C7	C7	C7					

M	These requirements are mandatory
C	Conditional Requirements (These rules have to be followed for the relevant requirement. The provision allocated must be mentioned on the layout.)
NB	Need Based (when the process demands the facility or equipment)
N/A	Not Applicable
C- 1: Hand wash stations are required (i) at the entrance to the kitchen; (ii) in the ready to eat preparation area; additional requirements may apply	
C- 2 : When hand wash stations are not a mandatory requirement within the premises, there should be an access to clean hand wash basin within 20 Metres	
C-3: Food handlers should have access to clean and well-maintained toilets located within 20 Metres of the Food Preparation area. When toilets are inside the kitchen, there must be a double door separation and a hand wash station in front of the toilet.	
C-4: Chest freezers should be used for frozen pre-packaged foods only (Ice cream, sausages, nuggets etc). It should not be used for raw meat/ fish/ poultry or food prepared in-house.	
C-5: Grease traps that are on the floor should not be inside the kitchen. However, exemptions may be provided for traps that are placed below the pot-wash sinks by the Food Safety Dept. C-6: No Rice based meals and curries to be prepared and sold in Cafeteria	
C-7: Chemicals and non-food items must be stored away from food in grocery stores, supermarkets and departmental stores C-8: Milling area should be separated from sale area	
C-9: The Food List has to be approved by the Applied Nutrition Section of Food Safety Department	
NB-1: Only if Fish is prepared. It must be mentioned in the layout that 'Fish Will not Be Prepared in the Facility'	
NB-2: Only if the equipment is required based on the menu and the process	
NB-3: When hot and cold food is transported to different locations, facilities to transport food should be available based on the quantity of food transported	
NB-4: Minimum total area for Tandoor kitchen would be 380 Sq Ft	
NB-5: Fly traps must be: placed at a height not above 2 M; placed away from light sources; and, should not be visible from outside. Electric Fly Killers without glue boards should not be placed above food preparation and storage area.	

**Subject to changes based on the Dubai Economy requirements.*

