1- Introduction:

This code outlines basic procedures that are necessary to ensure that all food reaching the consumer is kept free of contamination during transportation. The safe transportation of food is a key step in ensuring that the food that ultimately reaches the consumer is safe to eat and of highest quality, as improper and unhygienic transportation could lead to breaking the food safety circle. Many studies have indicated that improper food transportation could lead to food poisoning or food spoilage.

Transportation of foods presents three types of hazards:

- **Physical hazards** such as pieces of metal, wood, glass or other foreign bodies which may find their way into foods while being transported.
- **Chemical hazards** from previous non-food cargoes, from non-food cargoes mixed in the same load; from refrigerant leaks, from residues of cleaning agents, or from the external environment.
- **Biological hazards** from contamination by bacteria, moulds, yeast, parasites, algae, and the growth of biological contaminants if the temperature control is inadequate.

Reducing or eliminating the above-mentioned hazards could be achieved through applying proper cleaning programs and following good transportation practices (the most important of which is controlling the temperature during food transportation).

Good communication between shipper/manufacturer, transporter and receiver of foodstuffs is essential. They share responsibility for food safety on this part of the food chain. Food manufacturers or receivers are responsible for communicating to transporters specific food safety control procedures required during transportation. Hence all food control systems have put a lot of emphasis on food transportation and indicated that it could be the detrimental in preventing many health and economic catastrophes for the consumers and food manufacturers.

The Local Order # 11 for 2003 concerning Public Health and Community Safety in the Emirate of Dubai stipulated that food handling in Dubai should be according to the approved health requirements, in addition to reiterating the importance to inspect food establishments to ensure their compliance to the approved standards and regulations.

Based on the above, the Food Control Section, Public Health Department, Dubai Municipality is pleased to issue these guidelines to organize food transportation, with an aim to ensure that foods are safe to consume.
2- Purpose & Scope:
The purpose of this guideline is to assist those involved in the shipment and receipt of food to achieve the objective of protecting the food from contamination or adulteration during transport. The Code is meant to apply to all transport of foods and beverages and their ingredients (components) in the Emirate of Dubai.

3- Definitions:

3-1 "Food" or “Foods”: includes any article manufactured, sold or represented for use as food or drink (including water) for humans and any ingredient that may be mixed with food for any purpose whatsoever.

3-2 Food Transportation Unit: This includes vehicles, aircraft, ships, containers, boxes, bulk tanks, trailers and any other transportation unit used to transport food.

3-3 "Perishable Food" means a food item or ingredient that is susceptible to deterioration or loss of quality due to the microbial or enzymatic actions when such foods or ingredients are subjected to temperature abuse.

3-4 "Potentially Hazardous Food" means any food in a form or state which is capable of supporting the growth of pathogenic microorganisms or the production of toxins. Example for such foods involve meat, poultry, seafood, milk and its products.

3-5 Cross Contamination: it is the transfer of microbes or other food contaminant from one food to another.

4- Responsibility:
The transporter/distributor involved in transportation of the food product is responsible for the following:

1- Application of adequate cleaning and sanitizing procedures.
2- Efficient and safe separation of mixed loads.
3- Provision of required temperature controls during transport
4- Proper disposition of food products subjected to spills or other disasters during transport.

The food receiver (Any food producer, retailer, wholesaler, food service establishment, such as restaurants, hotels, cafeterias, etc) is responsible to ensure, upon receipt of the transported food product, that foods are safe and have been maintained at the proper temperatures. The shipper or processor is responsible to ensure that foods are safe and have been maintained at proper temperatures prior to transportation.
5-1 General Requirements for Transporting foodstuffs:

5-1 Food transporters should follow the safe and hygienic practices applied during all stages of food transportation such as unloading/loading, delivery, inspection and receiving etc.

5-2 Food transporters must have valid occupational health cards which shall be submitted upon request by the DM staff.

5-3 Foods should be transported by transportation units, which are approved by the Food Control Section of Dubai Municipality.

5-4 Name, address of the transporting company, contact numbers, and permit number shall be clearly displayed at the food transportation unit.

5-5 Food transportation units shall not be used for transporting non-food items in such a way that leads to cross contamination. Whenever, possible, food transportation units shall be solely designated for transporting specific food items.

5-6 The type of the transportation unit used for transporting foodstuffs shall be suitable for the risks that are associated with those products. In this regard, the following shall be adhered to:

- The food transportation unit shall be chilled for the chilled food products (1 – 5 C).
- The food transportation unit shall be frozen for the frozen food products (-18 C or less).
- The food transportation unit may not be chilled for dry or canned foods. However, the temperature of transporting such foods shall not exceed the temperature of storing these foods (maximum 25- 30C). However, transportation units shall be well ventilated in such a way that decreases the temperature and humidity inside these units. In all cases, food transportation units used for dry food items must be covered properly to prevent entry of pest and contamination from dust.

5-7 The transportation units shall be inspected, cleaned/disinfected daily and must be pre-cooled before loading to verify the efficiency of the cooling unit. Slow pre-cooling is tantamount to defects in the cooling units, leakage of the refrigerant or in the rubber gasket seal of the vehicle. Pre-cooling shall reach the minimum required temperature for the storage of the food item to be loaded into the vehicle. Pre-cooling time and temperature shall be recorded and shall be made available for inspection at all times either by the DM-FCS inspector or any buyer's representative.
6- Specific Requirements for Food transportation Units:

6-1 The food transportation unit shall be capable of keeping the transported food within the required temperature throughout the transportation period.

6-2 The food transportation unit shall be designed in such a way that allows monitoring the temperature from outside.

6-3 Adequate space shall be available in such a way to facilitate loading and unloading.

6-4 The food transportation unit shall be designed in such a way that prevents cross contamination.

6-5 The food transportation unit shall have good design and shall be well maintained.

6-6 The food transportation unit shall be designed in such a way that permits cleaning, sanitizing, and getting rid of the cleaning water.

6-7 The food transportation unit shall be made of cleanable and sanitizable material.

6-8 Internal surfaces shall be smooth and free from crevices or sharp angles.

6-9 The food transportation unit shall be closed and covered from all sides.

6-10 Connections, nuts, and soldering at the internal surfaces shall be minimized.

6-11 Adequate lighting shall be provided.

6-12 Shelves or other means to separate foodstuffs shall be provided.

6-13 Wall, floors, and ceilings shall be made of stainless steel, aluminum, or any other suitable food grade material.

6-14 Stainless hooks shall be provided to hang chilled or frozen meat carcasses.

6-15 Plastic or air curtains shall be provided at the doors in order to prevent the escape of cold air during loading or unloading.

6-16 Tankers used in transporting water or fluid foodstuffs shall be supplied with easy to dismantles pipes and shall be made from non-reactive and non-rusty materials (such as stainless steel)

6-17 The food transportation unit shall be designed in such a way that prevents entry of insects, pests, and external contamination.
6-18 The equipment used for chilling the foods shall be designed in such a way that avoids contaminating the foods. Adequate measures shall be in place to discover any leakage of the cooling material.

6-19 Cooling fluids shall be used based on their safety and after assessing their hazards by the concerned authorities when inspecting the transportation units. Refrigerants to be used in the cooling unit shall be in accordance with Gulf Standard GS 970/1997

7- **Utensils used in transporting foodstuffs:**

The utensils have to be:

7-1 Made of food grade material.
7-2 Designed in such a way that prevents contamination.
7-3 Made from non-reactive material which shall not impart any adverse effect on the taste, color or odor of the foods.
7-4 Shall not be used for transporting non-foods unless they are cleaned and sanitized properly.
7-5 Proper separation shall be maintained between foods and shall be organized in such a way that prevents cross contamination.

8- **Responsibilities of the Establishments that own the food Transportation Units:**

8-1 Bringing all of their food transportation vehicles to the Food Control for inspection.
8-2 Establishing and following a regular maintenance program for the vehicle, especially for the cooling units.
8-3 A regular cleaning and maintenance program shall be provided. Documents of such programs shall be available upon request. Personnel in charge in cleaning and disinfecting the food transportation unit must be properly trained in handling chemicals and in carrying out the cleaning and disinfecting process.
8-4 Conducting an annual calibration for the cooling units.
8-5 In case of any breakdown for the vehicle or its cooling units, an alternative vehicle conforming to the stipulated standards shall be provided promptly to transport the foods to ensure their safety and hygiene.
8-6 If a vehicle is changed from transporting non-food products to transporting food products, the establishment has to ensure that proper and thorough cleaning is conducted to avoid food contamination, and records shall be kept.
8-7 Foods shall be loaded and unloaded from and at the designated areas and away from physical, biological, or chemical contaminants.
The establishment has to ensure that the driver or the food transporter does not turn off the cooling units while transporting the foodstuff.

Complete temperature logs shall be kept for chilled or frozen vehicles. These logs shall be available upon request.

Ensuring that proper air circulation is secured throughout the whole shipment within the required time. In this regard the foods shall be organized in such a manner that guarantees chilling or freezing the foods as required.

The food transportation units (especially the tanks) shall be clearly marked that they are used only for transporting foodstuffs.

The food establishment has to provide training for the food transporters in order to be aware about their responsibilities regarding following up proper transportation practices. Hence, the food transporters should have basic training about the food safety during loading, transportation, and delivery of foods. Training should be focused on the type of food being handled and the necessary corrective action to implement in case of non-conformances in good distribution/transportation practices.

The foods which become unfit during transportation have to be identified and shall be disposed of properly. In this regard the following information has to be recorded and submitted to the food control authority upon request:

- Number or vehicle or container.
- Last transported consignment.
- Temperature record during the transportation.
- Maintenance and cleaning records.

Should a transportation spill occur involving a food shipment, the food transporter has to ensure that:

8-13-1 All potentially hazardous foods that have been subjected to temperature abuse (i.e. have remained within the danger zone of 5°C to 65°C for more than 4 hours) are identified and discarded in such a fashion that precludes the food from being utilized for human consumption.

8-13-2 Canned or packaged goods that have been subjected to unintentional freezing, which has compromised the integrity of the package (e.g. burst can seams) should be itemized and discarded in such a fashion that precludes the food from being utilized for human consumption.

8-13-3 The food control authorities have to be informed of the procedures contained in 8-13-1 and 8-13-2 above.

Procedures for product recall must be available which could permit fast, accurate and efficient recall/segregation and disposal of the affected food items. Contact information of buyers, delivery personnel and each personnel involve in the food chain must be readily available upon request to facilitate product recall implementation.
9- Responsibilities of the Food Receiver:

9-1 Ensuring that all proper food storage and display instructions are strictly followed.

9-2 Informing the manufacturer, importer, etc when receiving foods that were not transported properly (e.g. not complying with the recommended temperature, improper separation between the food items, etc).