

## CODE OF HYGIENIC PRACTICE FOR THE TRANSPORT OF FOOD IN BULK AND SEMI-PACKED FOOD

*CXC 47-2001<sup>1</sup>*

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<sup>1</sup> The Code of Hygienic Practice for the Transport of Food in Bulk and Semi-Packaged Food was adopted by the Codex Alimentarius Commission, 2001. The Code has been sent to all Member Nations and Associate Members of FAO and WHO as an advisory text, and it is for individual governments to decide what use they wish to make of the Guidelines.

## **INTRODUCTION**

Food may become contaminated or reach their destination in an unsuitable condition for consumption unless control measures are taken during transport. Such condition may occur even where adequate hygiene measures have been taken earlier in the food chain. Adequate transportation systems should be in place which will ensure that foods remain safe and suitable for consumption upon delivery and assist countries to assure continued trade.

Good communication between shipper/manufacturer, transporter and receiver of foods 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.

This document is formatted in accordance with the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev.3 (1997)), which must be consulted in the use of this Code. Those sections of this Code that require specific food safety requirements beyond those contained in the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev.3 (1997)), due to specific transportation characteristics, are noted and the specific requirements are detailed.

This code is not applicable to, and do not take precedence over, other Codex commodity - specific codes already in existence for such commodities in bulk, for example the Recommended International Code of Practice for the Storage and Transport of Edible Oils and Fats in Bulk (CAC/RCP 36-1987, Rev.1 – 1999).

## **SECTION I OBJECTIVES**

The code of hygienic practice for the transport of bulk and semi-packed foods:

- identifies additional requirements of food hygiene applicable to the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969, Rev 3 (1997)) applicable to the condition of the food transportation unit and the loading, transport, in-transit storage and unloading of bulk and semi-packed foods to ensure that food remains safe and suitable for human consumption.
- indicates how to implement these controls, and
- provides ways to verify that these controls have been applied.

## **SECTION II SCOPE, USE AND DEFINITIONS**

### **2.1 SCOPE AND USE**

This code of practice covers the condition of the food transportation unit, loading, transport, in-transit storage and unloading of bulk, semi-packed foods and fresh produce. This code covers food transportation unit and product from the points of shipment to the points of receipt. Examples of foods included in this code include:

- Food transported from the packaging or processing facility to a retail/distribution establishment,
- Food transported from one process/distribution facility to another or from a process/distribution facility to another or from a process/distribution facility to a retail establishment,
- Food transported from collection points, elevators, storage facilities, etc., to processing plants/distribution sites, or retail markets.

This code does not cover growing and gathering or fishing operations that occur prior to loading product into the food transportation unit for shipment, nor does it cover in-plant conveyance of product that occurs after unloading or after off-loading and emptying. Examples of foods excluded from this code are the following:

- On farm movement of a product,
- Movement from the field to collection facility, packaging facility, or storage facility.

The code's provisions are to be applied in addition to all applicable provisions of the Recommended International Code of Practice - General Principles (CAC/RCP 1-1969, Rev. 3 (1997)) including Section 8 that specifically addresses transportation.

## 2.2 DEFINITIONS

**Food transportation unit:** Includes food transport vehicles or contact receptacles (such as containers, boxes, bins, bulk tanks) in vehicles, aircraft, railcars, trailers and ships and any other transport receptacles in which food is transported.

**Bulk:** Means unpacked food in direct contact with the contact surface of the food transportation unit and the atmosphere (for example, powdered, granulated or liquid form).

**Semi-packed food:** Semi-packed food is a food which might come in direct contact with the food transportation unit or the atmosphere (e.g. vegetables and food in crates and bags).

## SECTION III PRIMARY PRODUCTION

All sub-sections of the provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## SECTION IV ESTABLISHMENT: DESIGN AND FACILITIES

All sub-sections of the provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## SECTION V CONTROL OF OPERATION

### 5.1 CONTROL OF FOOD HAZARDS

The provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

#### 5.1.1 IDENTIFICATION OF POTENTIAL HAZARDS

It may be useful to refer to the listed questions (see Table 1) to identify and manage hazards during transport of bulk and semi-packed foods. Reference is made also to the HACCP approach.

**Table 1**

Is the food "ready for direct consumption"?
Are the conditions of the food transportation unit likely to introduce or support the increase of a hazard?
Is it likely, that a hazard is introduced or increased during loading?
Is it likely, that a hazard may increase during transport or storage in the food transportation unit?
Is it likely, that a hazard is introduced or increased during unloading?

### **5.1.2 RECORDS OF PRIOR CARGOES AND PRIOR CLEANING**

The transporter should maintain records, readily available at the food transportation unit or as prescribed by the official agency having jurisdiction, of the three most recent prior cargoes and cleaning and disinfection, where necessary, method employed of the food transportation unit including volumes transported and make this information, on request, available to the food shipper, official control authorities and/or receiver/food manufacturers, for evaluation of potential hazards.

A complete record of previous cargoes should be kept over a period of six months by the transporter.

### **5.1.3 SOURCES OF HAZARDS**

The possibility of a hazard should be considered from the following sources, cited as examples:

#### ***5.1.3.1 Hazards related to the food transportation unit***

Unsuitability of the construction material and coating, lack of sealing/locking device, residues of previous cargoes, residues from cleaning and sanitizing materials.

Where appropriate consideration should be given to food transportation unit's dedicated to single commodity use.

#### ***5.1.3.2 Hazards related to loading and unloading***

Increase/decrease of temperature of the food. Undesirable introduction of microbes, dust, moisture, or other physical contamination.

#### ***5.1.3.3 Hazards related to transport***

Leakage of heating/cooling fluid. Break down of temperature control.

## **5.2 KEY ASPECTS OF HYGIENE CONTROL SYSTEMS**

The provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## **5.3 INCOMING MATERIAL REQUIREMENTS**

The provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## **5.4 PACKAGING**

The provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## **5.5 WATER**

The provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## **5.6 MANAGEMENT AND SUPERVISION**

The provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## **5.7 DOCUMENTATION AND RECORDS**

Suitable controls can be formulated by shippers or receivers to ensure food safety during transport in particular cases (see questions in Table 1). Such controls should be communicated in writing. Documentation is an important tool for validation and for verification that the principles have been adhered to. This documentation may include food transportation unit number, registration of previous loads, temperature/time recordings and cleaning certificates. Such documentation should be available to the official agencies having jurisdiction. It should be noted that some food transportation unit's are intended for single use only.

## **5.8 RECALL PROCEDURES**

The provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## **5.9 DEDICATED TRANSPORT**

Where appropriate, particularly bulk transport, containers and conveyances should be designated and marked for food use only and be used only for that purpose.

Bulk food in liquid, granulated or powder form must be transported in receptacles and/or containers/tankers reserved for the transport of food unless the application of principles such as HACCP demonstrates that dedicated transport for these products is not necessary to achieve the same level of food safety.

## **SECTION VI ESTABLISHMENT: MAINTENANCE AND SANITATION**

All sub-sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

Food transportation unit's, accessories, and connections should be cleaned, disinfected (where appropriate) and maintained to avoid or at least reduce the risk of contamination. It should be noted that depending on the commodity relevant, different cleaning procedures are applicable, which should be recorded. Where necessary, there should be disinfection with subsequent rinsing unless manufacturers instruction indicates on a scientific basis that rinsing is not required.

## **SECTION VII ESTABLISHMENT: PERSONAL HYGIENE**

All sub-sections of the provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

The General Principles of Food Hygiene should apply to all personnel in contact with the food.

## **SECTION VIII TRANSPORTATION**

All sub-sections of the provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

### **8.4 FOOD TRANSPORTATION UNITS**

The design of the food transportation unit should be such as to avoid cross contamination due to simultaneous or consecutive transport. Important aspects are cleanability and appropriate coatings.

Construction and design of the food transportation unit should facilitate inspection, cleaning, disinfection and when appropriate enable temperature control.

Use of means for cooling or heating should by design and construction be such as to avoid contamination. Although hot water and steam are preferred means of heating, other substances may be used on the basis of safety and risk evaluation and inspection procedures. Upon request by the competent authority, evidence may be required to demonstrate that the heating media employed have been properly evaluated and safely used.

Inner surface materials suitable for direct food contact should be used. These should be non-toxic, inert, or at least compatible with the transported food, and which do not transfer substances to the food or adversely affect the food. Stainless steel or surface coated with food-grade epoxy resins are most suitable. The interior design should eliminate areas that are difficult to access and clean.

The appropriate design of the food transportation unit should assist in preventing access of insects, vermin, etc, contamination from the environment, and when necessary, providing insulation against loss or gain of heat, adequate cooling or heating capacity, and facilitation of locking or sealing.

There should be appropriate facilities conveniently available for cleaning and, where appropriate disinfecting of the food transportation unit.

Auxiliary equipment should be (where appropriate) subjected to the above stated requirements.

To maintain sanitary conditions, facilities should be provided for the storage of pipes, hoses and other equipment used in the transfer of foods.

## **SECTION IX PRODUCTION INFORMATION AND CONSUMER AWARENESS**

All sub-sections of the provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

## **SECTION X TRAINING**

All sub-sections of the provisions of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1- 1969, Rev.3 (1997)) and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

It is important that personnel responsible for the transport are well aware of the nature of the foods that are being handled/transported and the possible extra precautionary measures that may be required. Personnel should be trained on food transportation unit inspection procedures for food safety.