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DRAFT EAST AFRICAN STANDARD

Code of hygienic practice for the transport of food in bulk and semi-packed food

EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 010, *Food hygiene and safety management*.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

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 to ensure that foods remain safe and suitable for consumption upon delivery, while also supporting countries to assure continued trade.

Good communication and adequate sensitization 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.

The provisions of this code should be applied alongside the relevant provisions of EAS 39.

This code is not applicable to, and do not take precedence over, other EAS commodity - specific codes already in existence for such commodities in bulk, for example the Recommended Code of Practice for the Storage and Transport of Edible Oils and Fats in Bulk EAS 320.

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

- a) identifies additional requirements of food hygiene applicable to the Recommended Code of Practice – General Principles of Food Hygiene 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.
- b) indicates how to implement these controls, and
- c) provides ways to verify that these controls have been applied.

Code of hygienic practice for the transport of food in bulk and semi-packed food

1 Scope

This draft East Africa Standard provides guideline on transportation of food in bulk and semi-packed food.

This standard 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:

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EAS 39, *General principles of food Hygiene — Code of practice*

EAS 320, *Code of hygiene for transportation of edible fats and oils in bulk*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

food transportation unit

food transport vehicles or contact receptacles (such as containers, boxes, bins, cans, bulk tanks) in vehicles, aircraft, railcars, motorcycles, donkey carts, bicycles, trailers and ships and any other transport receptacles or means in which food is transported

3.2

bulk

unpacked food in direct contact with food transportation unit surfaces and the atmosphere (for example, powdered, granulated or liquid form)

3.3

semi-packed food:

semi-packed food: food packed in crates or bags that may contact the transportation unit surface or atmosphere

4. Primary Production

All sub-sections of the provisions of the EAS 39, as appropriate, Codes of Hygienic practices and other specific product relevant standards should be applied.

5 Establishment: Design and Facilities

All sub-sections of the provisions of the EAS 39 and, as appropriate, other EAS and Codex Codes of Hygienic Practice, shall be applied.

6. Control of Operation

6.1 Control of food hazards

The provisions of the EAS 39 and, as appropriate, other relevant EAS standards and Codex Codes of Hygienic Practice, shall be applied.

6.1.1 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?

6.1.2 Records of prior cargoes and prior cleaning

6.1.2.1 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.

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

6.1.3 Sources of hazards

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

6.1.3.1 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.

6.1.3.2 Hazards related to loading and unloading

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

6.1.3.3 Hazards related to transport

Leakage of heating/cooling fluid. Breakdown of temperature control.

6.2 Key aspects of hygiene control systems

The provisions of the EAS 39 and, as appropriate other relevant EAS standards, other Codex Codes of Hygienic Practice, shall be applied.

6.3 Incoming material requirements

Only raw materials and other ingredients that are fit for purpose should be used. Incoming materials including food ingredients should be procured according to specifications, and their compliance with food safety and suitability specifications should be verified where necessary. Supplier quality assurance activities, such as audits, may be appropriate for some ingredients. Raw materials or other ingredients should, where appropriate, be inspected (e.g. visual examination for packages damaged during transportation, use-by-date and declared allergens, or temperature measurement for refrigerated and frozen foods) for appropriate action before processing. Where appropriate, laboratory tests could be conducted to check food safety and suitability of raw materials or ingredients. These tests may be conducted by a supplier that provides a Certificate of Analysis, the purchaser, or both. No incoming material should be accepted by an establishment if it is known to contain chemical, physical or microbiological contaminants which would not be reduced to an acceptable level by controls applied during sorting and/or processing where appropriate. Stocks of raw materials and other ingredients should be subject to effective stock rotation. Documentation of key information for incoming materials (e.g. supplier details, date of receipt, quantity etc.) should be maintained.

6.4 Packaging

Packaging design and materials should be safe and suitable for food use, provide adequate protection for products to minimize contamination, prevent damage, and accommodate proper labelling. Packaging materials or gases where used should not contain toxic contaminants and not pose a threat to the safety and suitability of food under the specified conditions of storage and use. Any reusable packaging should be suitably durable, easy to clean and, where necessary, to disinfect.

6.5 Water

Water, as well as ice and steam made from water, should be fit for its intended purpose based on a risk-based approach. They should not cause contamination of food. Water and ice should be stored and handled in a manner that does not result in their becoming contaminated, and the generation of steam that will contact food should not result in its contamination. Water that is not fit for use in contact with food (e.g. some water used for fire control and for steam that will not directly contact food) should have a

separate system that does not connect with or allow reflux into the system for water that will contact food. Water recirculated for reuse and water recovered from e.g. food processing operations, by evaporation and/or filtration should be treated where necessary to ensure that the water does not compromise the safety and suitability of food.

6.6 Management and supervision

The provisions of the EAS 39 and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

6.7 Documentation and records

6.7.1 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.

6.7.2 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.

6.8 Recall procedures

FBOs should ensure effective procedures are in place to respond to failures in the food hygiene system. Deviations should be assessed for the impact on food safety or suitability. Procedures should enable the comprehensive, rapid and effective identification, and removal from the market by the involved FBO(s) and/or return to the FBO by the consumers of any food that may pose a risk to public health. Where a product has been recalled because of the likely presence of hazards that may represent an immediate health risk, other products which are produced under similar conditions which may also present a hazard to public health should be evaluated for safety and may need to be recalled. Reporting to the relevant competent authority should be required and public warnings considered where product may have reached consumers and when return of product to the FBO or removal from the market is appropriate. Recall procedures should be documented, maintained, and modified where necessary based on the findings of periodic field trials. Provision should be made for removed or returned products to be held under secure conditions until they are destroyed, used for purposes other than human consumption, determined to be safe for human consumption, or reprocessed in a manner to reduce the hazard to acceptable levels, where permitted by the competent authority. The cause and extent of a recall and the corrective actions taken should be retained by the FBO as documented information.

6.9 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 shall 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.

7. Establishment: maintenance and sanitation

7.1 All sub-sections of the EAS 39 and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

7.2 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.

8. Establishment: personal hygiene

All sub-sections of the provisions of the EAS 39 and, as appropriate, other EAC and Codex Codes of Hygienic Practice, shall be applied. The General Principles of Food Hygiene should apply to all personnel in contact with the food.

9. Transportation

All sub-sections of the provisions of the EAS 39 and, as appropriate, other Codex Codes of Hygienic Practice, shall be applied.

9.1 Food transportation units

9.1.1 Protection during transport

Where necessary the food transportation unit should:

- a) protect the food from potential sources of contamination, including allergen cross contact. Where necessary the transporter/hauler should have procedures in place to ensure the integrity of the items they are transporting.
- b) protect the food from damage likely to render the food unsuitable for consumption and;
- c) provide an environment which effectively controls the growth of pathogenic or spoilage micro-organisms and the production of toxins in food.

9.1.2 Design and construction of conveyances and bulk containers

Where necessary, conveyances and bulk containers shall be designed and constructed such that they:

- a) Are made of materials that are non-toxic according to intended use and nature of the product.
- b) do not contaminate foods or packaging;
- c) can be effectively cleaned and, where necessary, disinfected and dried;
- d) permit effective separation of different foods or foods from non-food items that could cause contamination where necessary during transport;
- e) provide effective protection from contamination, including dust, pests, vermin fumes etc, contamination from the environment, and when necessary, providing vermin proof containers, adopting regular pest controls, and providing insulation against loss or gain of heat, adequate cooling or heating capacity, and facilitation of locking or sealing.
- f) The food transportation unit and associated transport receptacles should be suitably designed and constructed to facilitate inspection and cleaning.

9.1.3 Temperature and other environmental conditions control

- a) can effectively maintain the temperature, humidity, atmosphere, and other;
- b) conditions necessary to protect food from harmful or undesirable microbial;
- c) growth and deterioration likely to render it unsafe or unsuitable for consumption and;
- d) allow any necessary temperature, humidity, and other environmental conditions to be checked as per the nature of the food. Where appropriate, temperature monitoring equipment and recording devices should be checked for accuracy and calibrated at regular intervals to ensure accuracy. Where necessary, such equipment should have effective means of controlling and monitoring humidity, airflow and any other characteristics likely to have an effect on the safety or suitability of food. Temperature control systems that impact safety and suitability of food should be validated, and, as appropriate, monitored and recorded.

9.1.3 Use and maintenance of Conveyances and containers for bulk and Semi-packed foods

- a) Conveyances and containers for transporting food shall be kept in an appropriate state of cleanliness, repair and condition. Where necessary, construction and design of the food transportation unit should allow for maintenance, cleaning, disinfection and to facilitate inspection for pests.
- b) Containers and conveyances for bulk food transport shall be designated and marked for food use and used only for that purpose unless controls are taken to ensure that the safety and suitability of the food are not compromised.
- c) Where the same conveyance or container is used for transporting different foods, or non-foods, effective cleaning and, where necessary, disinfection, and drying should take place between loads especially when switching between different products or non-foods
- d) Vehicles such as bulk tankers used to transport liquids (e.g. raw milk, dairy mixes, juices, liquid egg, oil, water) must be adequately cleaned between loads to prevent or minimise allergen cross-contact. In some instances, dedicated bulk tankers may be best, for example, when transporting dry powders such as wheat flour.
- e) Food transportation units (including relevant accessories, connections) and load carrying areas should be inspected and, if necessary, cleaned to remove any residue of the previous load, to the extent possible, before re loading.
- f) Transportation of foodstuff should be carried out using a clean transport vehicle that is dry and free of the previous load to prevent or minimise the potential for allergen cross-contact. As necessary, transport containers should be cleaned before use. At unloading, transport containers containing allergenic commodities should be emptied of all cargo and cleaned as appropriate to prevent or minimise the potential for allergen cross-contact of the next load.
- g) To prevent or minimise the likelihood of allergen cross-contact, the transportation unit should be visually inspected and appropriately cleaned

10.1 Lot identification and Traceability

10.1.1 Each container of food should be marked to identify the producer and the lot.

10.1.2 Procedures should be put in place to enable the comprehensive, rapid, and effective identification, and withdraw or recall from the market of any food that may pose a risk to public health.

10.1.3 Provision should be made for recalled or returned products to be held under secure conditions until they are destroyed, used for purposes other than human consumption, determined to be safe for human consumption, or reprocessed in a manner to reduce the hazard to acceptable levels, where permitted by the competent authority.

11. Product information and consumer awareness

All sub-sections of the provisions of the EAS 39 and, as appropriate, other relevant EAS and Codex Codes of Hygienic Practice, shall be applied.

11. Training

11.1 Awareness and responsibilities

Food hygiene training is fundamentally important to the food business including transporters. All personnel should be aware of their role and responsibility in protecting food from contamination or deterioration. Personnel should have the knowledge and skills necessary to enable them to handle food hygienically. Those who handle cleaning chemicals or other potentially hazardous chemicals should be instructed in proper use to prevent contamination of food.

11.2 Training programmes

11.2.1 Elements to take into account in determining the extent of training required include:

- a) the nature of hazards associated with the food, e.g. its ability to sustain growth of pathogenic or
- b) spoilage microorganisms, the existence of potential physical contaminants or known allergens;
- c) the manner in which the food is produced, processed, handled and packed, including the likelihood of contamination;
- d) the extent and nature of processing or further preparation before consumption of the food;
- e) the conditions under which the food will be stored;
- f) the expected length of time before consumption of the food; and
- g) the use and maintenance of instruments and equipment associated with food.

11.2.2 Training programmes should also consider the knowledge and skill levels of the personnel being trained. Topics to be considered for training programmes could include the following as appropriate to a person's duties:

- a) the principles of food hygiene applicable to the food business;
- b) the measures relevant to the food business that are used to prevent contaminants in food;
- c) the importance of good personal hygiene, including proper hand washing and wearing, when needed,
- d) appropriate clothing, for food safety;
- e) the good hygiene practices applicable to the food business; and
- f) appropriate actions to take when food hygiene problems are observed.

11.2.3 In addition, for retail and food service operations where personnel have direct customer interaction, training may be necessary in conveying information about products (such as allergens) to customers.

11.3 Instruction and supervision

11.3.1 The type of instruction and supervision needed will depend on the size of the business, the nature of its activities and the types of food involved. Managers, supervisors and/or operators/workers should have sufficient knowledge of food hygiene principles and practices to be able to identify deviations and take necessary action as appropriate to their duties.

11.3.2 Periodic assessments of the effectiveness of training and instruction programmes should be made, as well as routine supervision and verification to ensure that procedures are being carried out effectively. Personnel tasked to perform any activities used in food control should be trained adequately to ensure that they are competent to perform their tasks and are aware of the impact of their tasks on the safety and suitability of the food.

11.4 Refresher training

11.4.1 Training programmes should be routinely reviewed and updated where necessary. Systems should be in place to ensure that transporters remain aware of all procedures necessary to maintain the safety and suitability of food. Records should be kept of training activities.

11.4.2 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.

11.4.3 The FBO assigning the food to be transported should ensure that the transporter/haulier has clear instructions to follow regarding potential hazards including allergen cross-contact situations e.g. to not allow mixed transportation of goods, when there is the likelihood of allergen cross contact

11.4.4 Where necessary the transporter/ haulier should demonstrate a clear understanding of the food they carry and potential allergen cross-contact situations

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CXC 47-2001, *Code of hygienic practice for the transport of food in bulk and semi-packed food*

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