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EAST AFRICAN STANDARD

Fresh nopal — Specification and grading



EAST AFRICAN COMMUNITY

HS 0810.90.00

Foreword

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

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. 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 procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that "Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose".

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.

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Introduction

In the preparation of this East African Standard, the following sources were consulted extensively:

CODEX STAN 185:1993 (Rev. 2005), *Standard for Nopal*

CODEX STAN 193:1995 (Rev.5:2009), *General Standard for Contaminants and Toxins in Foods*

CODEX STAN 228:2001 (Rev.1:2004), *General methods of analysis for contaminants*

CODEX STAN 230:2001 (Rev.1:2003), *Maximum levels for lead*

Codex Alimentarius website: http://www.codexalimentarius.net/mrls/pestdes/jsp/pest_q-e.jsp

USDA Foreign Agricultural Service website: <http://www.mrlatabase.com>

USDA Agricultural Marketing Service website: <http://www.ams.usda.gov/AMSV1.0/Standards>

USDA Plant Inspectorate Service website: http://www.aphis.usda.gov/import_export/plants

European Union: http://ec.europa.eu/sanco_pesticides/public

Assistance derived from these sources and others inadvertently not mentioned is hereby acknowledged.

This standard has been developed to take into account:

- the needs of the market for the product;
- the need to facilitate fair domestic, regional and international trade and prevent technical barriers to trade by establishing a common trading language for buyers and sellers.
- the structure of the CODEX, UNECE, USA, ISO and other internationally significant standards;
- the needs of the producers in gaining knowledge of market standards, conformity assessment, commercial cultivars and crop production process;
- the need to transport the product in a manner that ensures keeping of quality until it reaches the consumer;
- the need for the plant protection authority to certify, through a simplified form, that the product is fit for crossborder and international trade without carrying plant disease vectors;
- the need to promote good agricultural practices that will enhance wider market access, involvement of small-scale traders and hence making fruit and vegetable production a viable means of wealth creation; and
- the need to keep unsatisfactory produce from the market by allowing the removal of unsatisfactory produce from the markets and to discourage unfair trade practices e.g. trying to sell immature produce at the beginning of the season when high profits can be made. Immature produce leads to dissatisfaction of customers and influences their choices negatively, which disadvantages those traders who have waited until the produce is mature.

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Fresh nopal — Specification and grading

1 Scope

This Standard applies to modified stem of commercial varieties of nopals grown from *Opuntia ficus indica*, *O. tomentosa*, *O. hyptiacantha*, *O. robusta*, *O. inermis*, *O. undulata*, of the *Cactaceae* family, to be supplied fresh to the consumer, after preparation and packaging. Nopals for industrial processing are excluded.

2 Normative references

The following referenced documents are indispensable for the application 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.

CAC/GL 21, *Principles for the Establishment and Application of Microbiological Criteria for Foods*

CAC/RCP 1, *Recommended International Code of Practice — General Principles of Food Hygiene*

CAC/RCP 44, *Recommended International Code of Practice for the Packaging and Transport of Tropical Fresh Fruit and Vegetables*

CAC/RCP 53, *Code of Hygienic Practice for Fresh Fruits and Vegetables*

EAS 38, *Labelling of prepackaged foods — Specification*

CD/K/378:2010, *Horticultural industry — Code of practice*

3 Definitions

For the purpose of this standard the following definition shall apply:

3.1

similar varietal characteristics

having the same general characteristics, such as shape, texture and colour

3.2

well matured

reaching a stage of development which is indicative of good handling and keeping quality for the variety

3.3

fairly well matured

reaching a stage of development in which the outer skin (shell) is not tender

3.4

cracked

split open, exposing the flesh

3.5

damage

any specific defect which materially detracts from the appearance or edible or marketing quality. The following specific defects shall be considered as damage:

- (1) Scars, except stem scars caused by rodents or other means, which are not well healed and corked over, or which cover more than 10 percent of the surface in the aggregate, or which form depressions or pits that materially affect the appearance.
- (2) Stem scars which are unhealed on varieties which normally retain their stems after harvesting.
- (3) Dry rot which affects an area more than 2.5cm in diameter in the aggregate on a 4.5kg specimen or correspondingly smaller or larger areas depending on the size of the specimen.

3.6

serious damage"

any specific defect which seriously detracts from the appearance or the edible or marketing quality. The following specific defects shall be considered as serious damage:

- (1) Scars, except stem scars, caused by rodents or other means which are not well healed or corked over, or which cover more than 25 percent of the surface in the aggregate, or which form depressions or pits that seriously affect the appearance.
- (2) Dry rot which affects an area more than 5 cm in diameter in the aggregate on a 4.5 kg specimen, or correspondingly smaller or larger areas depending on the size of the specimen.

4 Provisions concerning quality

4.1 General

The purpose of the standard is to define the quality requirements of nopal at the export control stage, after preparation and packaging.

4.2 Minimum requirements

4.2.1 In all classes, subject to the special provisions for each class and the tolerances allowed, the nopals must be:

- (a) whole;
- (b) sound, produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- (c) clean, practically free of any visible foreign matter;
- (d) practically free of damage caused by pests;
- (e) free of abnormal external moisture, excluding condensation following removal from cold storage;
- (f) free of any foreign smell and/or taste;
- (g) firm;
- (h) free of damage caused by low temperatures;
- (i) free of prickles;
- (j) free of pronounced blemishes;
- (k) sufficiently developed and display satisfactory ripeness, depending on the nature of the produce.

They must have a shape, colour, taste and smell characteristic of the species.

4.2.2 The development and condition of the nopals must be such as to enable them:

- (a) to withstand transport and handling; and
- (b) to arrive in satisfactory condition at the place of destination.

4.3 Classification

Nopals are classified in three classes defined below:

4.3.1 “Extra” Class

Nopals in this class must be of superior quality. They must be characteristic of the variety and/or commercial type. They must be free of defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

4.3.2 Class I

Nopals in this class must be of good quality. They must be characteristic of the variety and/or commercial type. The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- slight defects in shape and colour;
- slight skin defects such as bruising, scarring, crusting, blemishes or other superficial defects. The total area affected shall not exceed 5%.

4.3.3 Class II

This class includes nopals which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in 4.2. They must be characteristic of the variety and/or commercial type. The following defects, however, may be allowed, provided the nopals retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape and colour, as long as the produce has the characteristics common to nopals;
- skin defects due to bruising, scarring, crusting, spots or other defects. The total area affected shall not exceed 10%.

5 Provisions concerning sizing

Size is determined by the length of the nopal, in accordance with the following table:

Size Code	Length (in centimetres)
A	9 - 13
B	13 - 17
C	17 - 21
D	21 - 25
E	25 - 30

6 Provisions concerning tolerances

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements of the class indicated.

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6.1 Quality tolerances

6.1.1 “Extra” Class

Five percent by number or weight of nopals not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

6.1.2 Class I

Ten percent by number or weight of nopals not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

6.1.3 Class II

Ten percent by number or weight of nopals satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting, pronounced irregularities or any other deterioration rendering it unfit for consumption.

6.2 Size tolerances

For “Extra” Class, 5%; and for Class I or Class II, 10%; by number or weight of nopals not satisfying the requirements as regards sizing, but falling within the class immediately above or below those indicated in Section 3.

7 Provisions concerning presentation

7.1 Uniformity

The contents of each package (or lot for produce presented in bulk) must be uniform and contain only nopals of the same origin, variety, quality and size. For “Extra” Class, colour and ripeness should be uniform. The visible part of the contents of the package (or lot for produce presented in bulk) must be representative of the entire contents.

7.2 Packaging

Nopals must be packed in such a way as to protect the produce properly. The materials used inside the package must be new¹, clean, and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed, provided the printing or labelling has been done with non-toxic ink or glue.

Nopals shall be packed in each container in compliance with CAC/RCP 44.

7.2.1 Description of containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the nopals. Packages (or lot for produce presented in bulk) must be free of all foreign matter and smell.

8 Marking or labelling

8.1 Consumer packages

In addition to the requirements of EAS 38, the following specific provisions apply:

8.1.1 Nature of produce

If the produce is not visible from the outside, each package shall be labelled as to the name of the produce and may be labelled as to name of the variety.

¹ For the purposes of this Standard, this includes recycled material of food-grade quality.

