



DEAS 332: 2021

ICS 67.080

DRAFT EAST AFRICAN STANDARD

Fresh chilli peppers — Specification

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. XXXXXX.

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 016 Fresh Fruits, vegetables and Tuber

This second edition cancels and replaces the first edition (EAS 332:2002), which has been technically revised.

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.

Fresh chilli peppers — Specification

1 Scope

This Draft East African Standard specifies requirements for fresh chilli peppers of varieties (cultivars) grown from *Capsicum annum*, *C. baccatum*, *C. chinense*, *C. frutescens* and *C. pubescens*, to be supplied fresh to the consumer.

This standard does not cover requirements for chilli peppers for industrial processing.

Note Chilli peppers with a minimum pungency of 900 on the Scoville Index. For levels of pungency see the Annex B

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.

CAC/RCP 44, *Code of practice for packaging and transport of fresh fruit and vegetables*

CAC/RCP 53, *Code of hygienic practice for fresh fruits and vegetables*

CODEX STAN 193, *General standard for contaminants and toxins in food and feed*

EAS 38, *Labelling of pre-packaged foods — General requirements*

ISO 874, *Fresh fruits and vegetables — Sampling*

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 chilli pepper fruit

fruit of plants from the genus *Capsicum*, of *Solanaceae* family

3.2 damage

defect, or any combination of defects, which materially or seriously detracts from the appearance or the edible or marketing quality of the chilli pepper

3.3 sound/whole
free from disease and physiological deterioration (such as but not limited to decay, breakdown, freezing damage) or adulteration/contamination, that appreciably affects their appearance, edibility, the keeping quality of the produce or market value

3.4 length
the greatest distance from the proximal to the distal end of the pod

4 Classification

4.1 General

Chilli peppers may be classified in three classes, namely:

- Extra Class;
- Class I; and
- Class II.

Note Defects are classified in Annex A

4.2 Extra Class

Chilli peppers shall be of superior quality. They shall be well developed and have all the characteristic and colouring typical of the variety and/or commercial type.

They shall be free of defects, with the exception of very slight superficial defects affecting an area of up to 0.5 % of the produce surface, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

4.3 Class I

Chilli peppers shall be of good keeping quality. They shall be characteristic of the variety or commercial type. The following slight defects, however, may be allowed, provided they do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a) slight defects in shape;
- b) slight defects in colouring, including sunspots;
- c) slight skin defects (that is, scratches, scars, scrapes and blemishes) not exceeding 2 % of the total surface area.

The defects shall not, in any case, affect the pericarp of the capsicum fruits.

4.4 Class II

Class II includes chilli peppers which do not qualify for inclusion in the higher class, but satisfy the requirements specified in 5. The following defects may be allowed, provided the chilli peppers may retain their essential characteristics as regards the quality, the keeping quality and presentation in the package:

- a) defects in shape;

- b) defects in colouring, including sunspots; and
- c) skin defects (that is, scratches, scars, scrapes, bruises and blemishes) not exceeding 3 % of the total surface area.

The defects shall not, in any case, affect the pericarp of the chilli pepper fruits

5 Requirements

5.1 Minimum Requirements

Chilli pepper shall be of a colour, flavour and taste characteristic of the species.

In all classes, subject to the special provisions for each class and the tolerances allowed, the fresh chilli peppers shall be:

- a) whole;
- b) fresh in appearance;
- c) firm;
- d) clean and practically free from any visible foreign matter;
- e) sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- f) practically free of pests and damage caused by them affecting the general appearance of the produce;
- g) free of abnormal external moisture, excluding condensation following removal from cold storage;
- h) free of any foreign smell and/or taste;
- i) free of damage caused by low and/or high temperature; and
- j) free of sunburns;

5.2 Maturity Requirements

The chilli peppers shall be carefully picked and have reached an appropriate degree of maturity in accordance with criteria and market requirements proper to the variety. The degree of maturity and condition of the chilli peppers shall be such as to enable them:

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

6 Sizing

Size is determined by the length of the chilli pepper fruit as indicated in Table 1

Table 1 — Sizing chilli pepper fruit according to length

| Size code | Length of fruit, (cm) |
|------------------|------------------------------|
| 1 | ≤ 4 |
| 2 | 4 < 8 |
| 3 | 8 < 12 |
| 4 | 12 < 16 |
| 5 | ≥ 16 |

7 Tolerances

7.1 General

Due to the nature of the produce, variations will occur even with proper grading and handling. Variations in quality and size may be tolerated by count as provided in 7.2 and 7.3

7.2 Quality tolerances

7.2.1 Extra Class

Extra Class may have not more than 5 % by number or weight of chilli peppers not satisfying the requirements of the class, but meeting those of Class I or, exceptionally, coming within the tolerances of Class 1.

7.2.2 Class I

Class I may have not more than 10 % by number or weight of chilli peppers not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that Class.

7.2.3 Class II

Class II may have not more than 15 % by number or weight of fresh chilli peppers not satisfying the requirements of the class but meeting the minimum requirements.

7.3 Size tolerances

For all classes, chilli peppers may have not more than 10 % by number or weight of chilli peppers corresponding to the size immediately above /or below that indicated on the package.

8 Contaminants

8.1 Heavy metals

Chilli pepper shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission in accordance with CODEX STAN 193

8.2 Pesticide residues

Chilli pepper shall conform to those Maximum Residue Limits (MRLs) for pesticides residue established by the Codex Alimentarius Commission

9 Hygiene

9.1 Chilli pepper shall be produced and handled in accordance with the appropriate sections of CAC/RCP 53.

9.2 Chilli peppers shall be free from parasites, microorganisms or substances originating from them in amounts which may present a hazard to human health

10 Packaging

10.1 The chilli pepper shall be packaged in food grade packaging material that will safeguard the hygienic, safety, nutritional, technological and organoleptic qualities of the produce in accordance with CAC/RCP 44 to avoid causing any external or internal damage to the produce.

10.2 The use of materials, particularly of paper or stamps bearing trade specifications may be allowed, provided the printing or labelling has been done with food class non-toxic ink or glue.

10.3 The contents of each package shall be uniform and contain only chilli peppers of the same origin, variety or commercial type, quality, size (if sized) and, in the case of Extra Class and Class I, of appreciably the same degree of ripeness and colouring.

10.4 A mixture of chilli peppers of different colours may be packed provided the origin, variety or commercial type, quality and size (if sized) are uniform.

10.5 The visible part of the contents of the package shall be representative of the entire contents. Miniature chilli peppers shall be reasonably uniform in size.

11 Labelling

Chilli pepper shall be labelled with the following provisions in accordance with EAS 38. In addition the following specific provisions shall appear legibly and indelibly:

- a) name and address of exporter, packer and/or dispatcher;
- b) name of the produce shall be "Fresh chilli peppers" if the contents are not visible from the outside;
- c) name of the variety or commercial type;
- d) name of country of origin;
- e) storage conditions;
- f) date of harvest; and
- g) class
- h) GMO status
- i) level of pungency indicated as "mild", "medium", "hot" or "extra hot", as appropriate.

Note Size identification code may also be included on the labelling

12 Sampling

Sampling shall be carried out in accordance with ISO 874.

Annex A
(informative)
Classification of defects

| Group of defects | Description |
|------------------------------------|--|
| Mechanical | <p>Mechanical cracks are fissures on the fruit's pericarp caused by handling and mechanical actions.</p> <p>Scratches are lesions on the pericarp of the fruit caused by a violent rubbing.</p> <p>Bruises are soft areas or spots in the pericarp or in the skin caused by knocks or compressions.</p> |
| Biological Entomological | <p>Scars are caused by some pests that scratch or bore into the surface of the fruit, thrips among them.</p> <p>Fractures are caused by some worms that feed from the fruit's pericarp.</p> <p>Stings and/or punctures are wounds that can be more or less deep, carried out by pests and birds, mainly.</p> |
| Microbiological | <p>Spots and dots of rotting caused by fungus, bacteria or virus: one of the most common diseases is the anthracnose, fungus disease that by attacking the fruits causes typical brown necrotic lesions, sometimes darker that can cover wide surfaces. It is caused by fungus belonging to the genres <i>Colletotrichum</i> (<i>Glomerella</i>), <i>Gloeosporium</i>, <i>Gnomonia</i>, <i>Marssonina</i>, <i>Mycosphaerella</i>, <i>Neofabrae</i> and <i>Pseudopeziza</i>.</p> <p>Rot of the peduncular extreme: is caused by fungus or bacteria that attack the fruit in the base of the peduncle and, in many cases, permeates to the flesh and the seeds.</p> <p>"<i>Fumagina</i>": is caused by the fixation, in film form, of the fungus mycelium <i>Capnodium</i> spP., which forms spots with the appearance of layers of soot. It affects the surface of the fruit.</p> |
| Meteorological and climate related | <p>Sunburns: is the change of colour of some areas in the surface of the fruit caused by excessive exposure to the sun.</p> |
| Genetic-physiological | <p>Deformations: alterations of the fruits form in relation to the ones corresponding to their specie or variety.</p> <p>Physiological crack are fissures on the pericarp of the fruit caused by the effect of the ripening process.</p> <p>Softening: the softening of the fruit mainly caused by the advanced state of the ripeness process or because the fruit is harvested before its physiological maturity (tender).</p> |

ANNEX B
(informative)

Levels of pungency of chilli peppers

| Levels of pungency | Scoville units | Total capsaicinoids (microg/gm dry weight) | Test method |
|--|------------------|---|-------------|
| MILD | 900 – 1,999 | 60 - 133 | ISO 3513 |
| MEDIUM | 2,000 - 19,999 | 134 - 1,333 | |
| HOT | 20,000 - 100,000 | 1,334 - 6,600 | |
| EXTRA HOT | > 100,000 | > 6,600 | |
| NOTE 15 Scoville heat units is equal to 1 µg/g (dry weight). | | | |

Bibliography

- [1] ISO 3513:1995, *Chillies — Determination of Scoville index*
- [2] US 999:2013, *Fresh chilli pepper — Specification*
- [3] EAS 332:2002, *Fresh capsicums— Specification*
- [4] UNECE STANDARD FFV-61, *Chilli peppers 2017 edition*
- [5] CODEXSTAN 307-2011, *Standard for chilli peppers*

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