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DRAFT EAST AFRICAN STANDARD

Fresh mangoes — 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.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

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.

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.

EAS 329 was prepared by Technical Committee EAS/TC 016

Fresh mangoes — Specification

1 Scope

This Draft East African Standard specifies requirements and methods of sampling and test for fresh mangoes (*Mangifera indica L.*) from the family *Anacardiaceae*. This does not apply to green preserving mangoes and mangoes for industrial processing.

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.

EAS 38, Labelling of prepackaged foods — Specification

ISO 7558, Guide to the prepackaging of fresh fruits and vegetables

ISO 874, Fresh fruits and vegetables – Sampling

ISO 6633, Fruits, vegetables and derived products -- Determination of lead content -- Flameless atomic absorption spectrometric method

3 Terms and definitions

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

3.1

disease

any defect which more than slightly affects the appearance or edible quality of the mango.

3.2

sound

Not overripe, not soft and free from diseases or insect damage, or bruising or physical injuries affecting keeping quality of the fruit.

3.3

Food grade packaging material

Any material which when it comes in contact with food or if the area near food is unlikely to contaminate food with harmful materials

3.4

firm

not soft, flabby, or shriveled

3.5

Foreign matter

Any organic or inorganic substances which affects the appearance and typical smell of the avocado fruit.

3.6

physiological maturity

The stage when the fruit reaches its largest diameter

4 Requirements

4.1 General

4.1.1 Mangoes shall be true to variety and mature for ripening. In all classes, subject to the special provisions for each class and the tolerances allowed, the mangoes shall 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; especially mango fruit fly and mango seed weevil;
- 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) fresh in appearance;
- i) free of damage caused by low temperatures;
- j) free of black necrotic stains or trails;
- k) free of marked bruising; and
- l) sufficiently developed and display satisfactory ripeness.
- m) free from unhealed injury and traces of latex or dirt.

4.1.2 If a stalk is present shall not exceed 10 mm in length.

4.1.3 The development and condition of the fresh mango shall be such that enable them to:

- a) reach the appropriate stage of physiological maturity corresponding to the particular characteristics of the variety, and
- b) to withstand transport and handling;
- c) arrive in a satisfactory condition at the place of destination in order to ripen satisfactorily.

4.2 Specific requirements

4.2.1 Classification

4.2.1.1 Extra class

Mangoes in this class shall meet the following minimum requirements:

- a) Characteristic of the variety;
- b) Be of superior quality;
- c) Free of defects, with the exception of very slight superficial defects provided these do not affect the general appearance of the produce, quality, keeping quality and presentation in the package.

4.2.1.2 Class I

Mangoes in this class shall meet the following minimum requirements:

- a) Characteristic of the variety;
- b) Be of good quality;
- c) The following slight defects may however be allowed; provided that they do not affect the general appearance of the produce, quality, the keeping quality and presentation in the package:
 - i) Slight defect in shape;
 - ii) Slight defect due to the rubbing or sunburn, suberized stains due to resins exudation (elongated trails excluded) and healed bruises not exceeding 3 cm², 4 cm², 5 cm² and 6 cm² for the size group A, B, C and D respectively.

4.2.1.3 Class II

Mangoes in this class shall meet the following minimum requirements:

This class includes mangoes, which do not qualify for inclusion in the extra class or class I, but satisfy the minimum requirements specified in clause 4.1. The following defects may be allowed, provided the mangoes retain essential characteristics as regards to the quality, the keeping quality and presentation:

- a) Defect in shape;
- b) Skin defects due to rubbing or sunburn, suberized stains due to resin exudation (elongated trails included) and healed bruises not exceeding 5 cm², 6 cm², 7 cm² and 8 cm² for size groups A, B, C and D respectively.

NOTE — In class I and II, scattered suberized rusty lenticels as well as yellowing of green varieties due to exposure to direct sunlight not exceeding 40 per cent of the surface and not showing any signs of necrosis are allowed.

4.2.2 Sizing

Fresh mangoes in all classes shall all be uniformly sized. Sizing is determined by the weight of the fruit, in accordance with table 1.

Table 1 – Sizing of mangoes

Size code	Weight in grams
A	200 – 350
B	351 – 550
C	551 – 800
D	>800

The maximum permissible difference by weight between fruits in the same package belonging to one of the above mentioned size groups shall be 75 g, 100 g, 125 g and 150 g for size groups A, B, C and D respectively.

4.3 Tolerances

4.3.1 Quality and size tolerances

Tolerances in respect of quality and size shall be allowed in each package for a produce not satisfying the requirements of the class indicated in 4.2.

4.3.1.1 Quality tolerances

4.3.1.1.1 *Extra class*

Five per cent by number or weight of mangoes not satisfying the requirements of the class, but meeting those of class I or exceptionally, coming within the tolerances of that class.

4.3.1.1.2 *Class I*

Ten per cent by number or weight of mangoes not satisfying the requirements of the class, but meeting those of class II or exceptionally, coming within the tolerances of that class.

4.3.1.1.3 *Class II*

Ten per cent by number or weight of mangoes satisfying neither the requirements of the class nor minimum requirements, with the exception of produce affected by rotting, marked bruising or any other deterioration rendering it unfit for consumption.

4.3.2 Size tolerances

The size tolerances for each size code shall be as provided in table 2. For all classes, 10% by number or weight of mangoes in each package are permitted to be outside (above or below) the group size range by 50% of the maximum permissible difference for the group.

Table 2 – Size tolerances for mangoes

Size code	Normal size range (grams)	Permissible size range ($\leq 10\%$ of fruit/package exceeding the normal size range)	Max tolerable difference between fruit in each package (grams)
A	200 – 350	180g – 425g	112.5
B	351 – 550	316g – 650g	150

C	551 – 800	496g – 925g	187.5
D	>800	≤10%	225

5 Contaminants

5.1 Pesticide residues

Fresh mangoes shall comply with those maximum residue limits established by the Codex Committee on Pesticide Residues for this commodity.

5.2 Metal contaminants

When tested in accordance with ISO 6633, the Lead content in fresh mangoes shall not exceed 0.1 mg/kg.

6 Hygiene

Fresh mangoes shall be prepared and handled in accordance with CAC/RCP 53-2003.

8 Packaging

7.1 Fresh mangoes shall be packed in such a way as to protect the produce properly. The food grade packaging material used inside the package shall be 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. Packages must be free from any foreign matter and the material shall be recyclable.

7.2 Fresh mangoes shall also be packed in containers in accordance with ISO 7558.

7.3 The contents of each package shall be uniform and consist exclusively of fresh mangoes of the same origin, variety and/or commercial type, and quality. The visible part of the content of the package shall be representative of the entire contents.

8. Labeling

In addition to the requirements of the EAS 38, the following specific provisions apply for each package; legibly and indelibly marked.

- i) Name, postal and physical address of the packer or dispatcher
- ii) Name of the produce as " Fresh mangoes ",
- iii) Name of the variety or commercial type.
- iv) Origin of produce
- v) Harvest date

- vi) Net weight (kg).
- vii) Size code
- viii) Class
- ix) Identification code and/or batch number
- x) storage instructions

10 Sampling

Representative samples of fresh mangoes shall be sampled in accordance with ISO 874

Bibliography

- [1] *CODEX STANDARD FOR MANGOES.* (CODEX STAN 184-1993)
- [2] *UNECE STANDARD FFV-45* concerning the marketing and commercial quality control of mangoes

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