DEAS 946: 2022

ICS 67.080.00

DRAFT EAST AFRICAN STANDARD

Dried fruits — Specification

EAST AFRICAN COMMUNITY

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Second Edition 2022

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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 025, *Processed fruits, vegetables and tubers*.

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Dried fruits — Specification

1 Scope

This East African Standard specifies requirements, sampling and test methods for dried fruits intended for direct human consumption or for other use in the food industry.

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.

AOAC 934.06, *Determination of the moisture content for dried fruits*

AOAC 963.20, *Sulfurous Acid (Total) in dried fruits — Calorimetric method*

EAS 38, *Labelling for prepacked foods — General requirements*

EAS 39, *Hygiene in the in the food and drink manufacturing industry — Code of practice*

ISO 763, *Fruits and vegetable products — Determination of ash insoluble in hydrochloric acid*

ISO 4832, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms — Colony-count technique*

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique*

ISO 4833-2, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 2: Colony count at 30 degrees C by the surface plating technique*

ISO 5522, *Fruits, vegetables and derived products — Determination of total sulphur dioxide content*

ISO 6579-1, *Microbiology of the food chain — Horizontal methods for detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp.*

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

ISO 6634, *Fruits, vegetables and derived products — Determination of arsenic content — Silver diethyldithiocarbamate spectrophotometric method*

ISO 6888-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Technique using Baird-Parker agar medium*

ISO 16649-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Esherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

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ISO 21527-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0,95*

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
dried fruits

Fruits which have been subjected, at an appropriate stage of maturity, to a process of drying (natural or artificial) from which, moisture has been removed, under controlled conditions of temperature, humidity and airflow, to the extent that the product is preserved

3.2
immature fruits
fruits which are not fully developed

3.3
immature dried fruit
dried fruit processed from an immature f ruit.

3.4
broken dried fruit
piece of dried fruit smaller than a normal set size

3.5
spoiled dried fruit
dried fruit that is darkened in colour or showing presence of mushy tissue, visible decomposition caused by bacteria, fungi, visible mould hyphae or any other indicating spoilage or infection

3.6
pest infested dried fruit
dried fruit damaged by insect and/or mite infestation

3.7
extraneous matter
dirt, pieces of skin, calyx, leaf, peduncle, twigs, bits of wood, soil or any other foreign matter among or on the dried fruit

3.8
fermented dried fruit
dried fruit damaged by fermentation to the extent that the characteristic appearance and/or flavour issubstantially affected

3.9
food grade material
material that will safeguard the hygienic, safety, nutritional, technological, and organoleptic qualities of the product

3.10
Extraneous matter
dirt, pieces of skin, calyx, leaf, peduncle, twigs, bits of wood, soil or any other foreign matter among or on dried fruit

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4 Product description

4.1 General

Dried fruits are the products prepared from substantially sound, appropriately matured, sufficiently developed or ripe fruits, according to type/characteristic of dried fruit. They are dried or dehydrated either by the sun or other recognized drying methods.

4.2 Presentation

It may be whole, sliced, cubed/diced, chunks, chips, trips, bulbs/balls, crisps, flakes, quarters, pieces or powdered. When in powder form, it shall be free flowing and free from agglomerates. other presentation such as leathers, rolls or sheets of the product may be used provided that the product:

(i) is sufficiently distinctive from other forms of presentation laid down in this standard and

(ii) meets all relevant requirements of this standard.

5 Requirements

5.1. Ingredients

5.1.1 Essential ingredients

Fruits as defined in 4.1.

5.1.2 Optional ingredients

The following ingredients may be used appropriately but not limited to:

a) spices and culinary herbs and/or their extracts;

b) edible coatings/stuffing material;

c) edible vegetable oils; and

d) citrus juice extracts such as lemon juice

5.2 General requirements

Dried fruit shall:

a) have an odour, colour and taste characteristic of the variety;

b) be free from foreign odour and traces of odour coming from abnormal fermented dried fruits;

c) be free from living and dead insects, insect fragments, rodents, mites or other parasites and moulds contamination; and

d) be practically free from extraneous matter.

5.3 Specific requirements

Dried fruit shall comply with the specific requirements given in Table 2 when tested in accordance with themethods specified therein.

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Table 2 — Specific requirements for dried fruits

S/N	Characteristics		Requirements		Test method
			Untreated	Treated	
i	Moisture, % (m/m), max	Dried Pineapples	20	20-44[e]	AOAC 934.06
		Dried Mango	15	15-35[a]	
		Melons	18	18-25	
		Dried bananas	18	18-25	
		Dried apples	22	25	
		Dried ripe papayas	18	18-25	
		Dried peaches	20	20-37	
		Dried pears	22	26 [b]	
		Dried apricots	25	25-40[c]	
		Dried figs	26	26 ≥ x ≤ 40[d]	
		Dried dates i) cane sugar varieties, % m/m, max, ii) invert sugar varieties and Deglet Nour, % m/m, max.	26 30	-	
		Jackfruits i) Dried Ripe Jack fruit ii) Immature jackfruits	19 08	- -	
		Dried Grapes per cent varieties except Monukka variety	18		

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		Monukka variety Currants seed-bearing varieties Malaga Muscatel variety treated	19 20 19 -	31	
ii	Acid insoluble ash, % (m/m), (on dry basis), max.	0.1			ISO 763

[a] Product with 30-35 % moisture shall be labelled as soft fruit/high moisture

[b] This requirement is for dried pears treated with preservatives or preserved by other means (e.g.pasteurization). Products between 26.0 and 40.0 per cent should be labelled as soft fruit/high moisture.

[c] This requirement is for dried apricots treated with preservatives or preserved by other means (e.g. pasteurization). Products between 32.0 and 40.0 per cent should be labelled as soft fruit/high moisture.

[d] This requirement is for dried figs treated with preservatives or preserved by other means (e.g.pasteurization). Products between 26.0 and 40.0 per cent should be labelled as soft fruit/high moisture.

[e] Products between 26.0 and 44.0 per cent should be labelled as soft fruit/high moisture

6 Food additives

6.1 Dried fruits may contain only permitted additives in accordance with CODEX STAN 192.

6.2 The content of residual Sulfur dioxide shall not exceed 1 000 mg/kg when tested in accordance with ISO ISO 5522.

7 Contaminants

7.1 Pesticide residues

Dried fruits shall comply with the pesticide maximum residue limits provided by the Codex Alimentarius Commission.

7.2 Heavy metals

Dried fruit shall not contain lead in amount exceeding 0.1 mg/kg when tested in accordance with the ISO 6633.

7.3 Mycotoxins

When determined in accordance with ISO 16050, the maximum content of aflatoxins in dried fruits shall not exceed 5 µg/kg for aflatoxins B_1 and 10µg/kg total aflatoxins.

8 Hygiene

8.1 Dried fruits shall be produced and handled under hygienic conditions in accordance with EAS 39.

8.2 Dried fruits shall comply with microbiological limits given in Table 4 when tested in accordance withthe

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methods specified therein.

Table 4 – Microbiological limits for dried fruits

Microorganism	Limit	Test method
Total plate count, cfu/g, max.	10^5	ISO 4833-1
Coliform, cfu/g, max.[a]	10^2	ISO 4832
Yeasts and moulds, cfu/g, max.	10^3	ISO 21527-2
Salmonella spp, per 25 g	Absent	ISO 6579-1
Staphylococcus aureus, cfu/g	Absent	ISO 6888-1
Escherichia.coli cfu/g	Absent	ISO 16649-2
[a] Applicable where optional ingredients are included in the product.		

9 Packaging

Dried fruits shall be packaged in food grade material that ensures the integrity and safety of the product.

10 Labelling

10.1 In addition to the labelling requirements of EAS 38, the following information shall be legibly and indelibly marked or labeled:

a) Name of the product depicting the true nature and presentation of the fruit;

i) if an added ingredient, as defined in 4.2, alters the flavour characteristic of the product, the name of the food shall be accompanied by the term “flavoured with X” or “X flavoured” as appropriate; and
ii) where a characteristic coating or similar treatment has been used, appropriate terms shall be included as part of the name.

b) brand or trade name, if any;

c) name and address of the producer or packer;

d) List of ingredients in descending order

e) declaration of preservative by common name or international numbering; if any;

f) declaration, if used “it contains sulphites’”;

g) batch/lot number;

h) net weight in metric units;

i) country of origin,

j) date of production;

k) Instructions for use where applicable

l) best before and

m) storage conditions.

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10.2 Nutritional labelling, nutrition and health claims shall be made in accordance with EAS 803, EAS 804 and EAS 805.

11 Sampling

Sampling shall be done in accordance with Annex A.

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Annex A
(normative)

Sampling

A.1 Definitions

A.1.1 lot
collection of primary containers or units of the same size, type, and style manufactured or packed under similar conditions and handled as a single unit of trade

A.1.2 lot size
number of primary containers or units in the lot

A.1.3 sample size
total number of sample units drawn for examination from a lot

A.1.4 sample unit
container, a portion of the contents of a container, or a composite mixture of product from small containers that is sufficient for the examination or testing as a single unit. For fill of container, the sample unit shall be the entire contents of the container

A.2 Sampling plans

Sampling shall be done in accordance with the plan specified in Table A.1.

Table A.1 – Sampling plan

Lot size (primary containers)	**Size of container, *n*[a]**
Net weight equal to or less than 1 kg (2.2 lb)	
4 800 or less	13
4 801 to 24 000	21
24 001 to 48 000	29
48 001 to 84 000	48
84 001 to 144 000	84
144 001 to 240 000	126
Over 240 000	200
Net weight greater than 1 kg (2.2 lb) but not more than 4.5 kg (10 lb)	
2 400 or less	13
2 401 to 15 000	21
15 001 to 24 000	29

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24 001 to 42 000	48
42 001 to 72, 000	84
72 001 to 120 000	126
Over 120 000	200
Net weight greater than 4.5 kg (10 lb)	
600 or less	13
601 to 2 000	21
2 001 to 7 200	29
7 201 to 15 000	48
15 001 to 24 000	84
24 001 to 42 000	126
Over 42 000	200

[a] *n* is the number of primary containers in sample.

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