



DEAS1273:2025

ICS 67.060

DRAFT EAST AFRICAN STANDARD

Quinoa flour — 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.

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 014, *Cereals, Pulses and their derived products*.

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Introduction

Quinoa flour, derived from the seeds of the *Chenopodium quinoa* plant, is a highly nutritious, gluten-free alternative to traditional wheat flour. Known for its rich protein content, essential amino acids, and high fiber, quinoa flour is increasingly popular in both culinary and health-conscious communities. It serves as a versatile ingredient for gluten-free baking, cooking, and as a thickening agent in soups and sauces. Additionally, quinoa flour is an excellent source of minerals like magnesium, iron, and phosphorus, offering numerous health benefits. Its mild, nutty flavor and fine texture make it a valuable option for a variety of food products, including breads, pancakes, pasta, and snacks. As awareness of its health benefits grows, quinoa flour continues to play a significant role in promoting balanced and nutritious diets.

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Quinoa flour— Specification

1.0 Scope

This draft East Africa standard specifies the requirements, sampling and methods of test for Quinoa flour derived from quinoa grains of (*Chenopodium quinoa*) intended for human consumption

2.0 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.

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

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

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

EAS 900, *Cereals and pulses — Sampling*

EAS 901, *Cereals and pulses — Test methods*

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

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

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

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 Quinoa flour

fine powder produced by grinding quinoa grains(the edible grains of the *Chenopodium quinoa*) into a flour-like consistency.

3.2

wholesome/sound

free from disease, deterioration (such as but not limited to decay, breakdown) or adulteration/contamination, that appreciably affects their appearance, the keeping quality of the produce or market value

3.3 clean

practically free from visible soil, fungal contamination, dust, or other visible foreign matter

3.4 foreign matter/ extraneous matter

all organic and inorganic material other than Quinoa flour

3.5 inorganic matter

stones, glass, pieces of soil and other mineral matter

3.6

food grade packaging material

material which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product

4 Requirements

4.1 General requirements

4.1.1 Quinoa flour shall be:

- a) clean, wholesome, uniform fine granulation,
- b) characteristic colour of the product.
- c) free from abnormal flavour, musty, or other undesirable odour;
- d) free from live pests; and

4.2 Specific requirements

Quinoa flour shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for Quinoa flour

S/No.	Characteristic	limit	Test method
i.	Crude fibre content, % m/m, max.	1.5	EAS 901
ii.	Total ash content, % m/m, max	1.5	
iii.	Residue on sieving through 180-micron sieve, % m/m, max.	20.0	
iv.	Crude protein content, %, m/m, min.	10	
v.	Moisture, % m/m, max	13	

5. Hygiene

5.1 Quinoa flour shall be produced, prepared and handled in accordance with EAS 39

5.2 Quinoa flour shall comply with microbiological limits given in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Microbiological limits for Quinoa flour

S/N	Micro-organism	limit (max)	Test method
i.	<i>Escherichia coli</i> , cfu/g, max	Absent	ISO 16649-2
ii.	<i>Salmonella</i> , in 25 g	Absent	ISO 6579-1
iii.	Yeast and moulds, cfu/g, max	10 ⁴	ISO 21527-2
iv.	<i>Staphylococcus aureus</i> , cfu/g,max	10 ²	

6.0 Contaminants

6.1 Pesticide residues

Quinoa flour shall comply with pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

6.2 Mycotoxin

Quinoa flour shall comply with the maximum limits for mycotoxins given in Table 4 when tested in accordance with the test methods prescribed therein.

Table 3 — Mycotoxin limits for Quinoa flour

S/No	Mycotoxin	limit (max)	Test method
i.	Total aflatoxins $\mu\text{g/kg}$	10	EAS 901
ii.	Aflatoxin B ₁ , $\mu\text{g/kg}$	5	

7 Packaging,

Quinoa flour shall be packaged in food grade packaging material which safeguards the hygienic, nutritional and organoleptic qualities of the product.

8.0 Labelling

8.1 In addition to the requirements in EAS 38, each package shall be legibly and indelibly labelled with the following:

- product name as "Quinoa flour";
- color and variety/common name;
- name, address and physical location of the producer/ packer/importer;
- lot/batch/code number;
- net weight, in metric units;
- the declaration "Food for Human Consumption";
- storage instruction";
- date of manufacture;
- best before date ;
- instructions for use and on disposal of used package; and
- country of origin.

8.2 Each container may be marked with the standards mark of quality.

9.0 Sampling

Sampling shall be done in accordance with EAS 900

Bibliography

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