DEAS 782: 2026

ICS 67.060

DRAFT EAST AFRICAN STANDARD

Composite flour — Specification

EAST AFRICAN COMMUNITY

Copyright notice

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 published on behalf of EASC by the EAC Secretariat 4th Edition, 2022.

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 and pulses*.

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.

This third edition cancels and replaces the second edition (EAS 782:2019), which has been technically revised.

Composite flour — Specification

1 Scope

This draft East African Standard specifies requirements, sampling and test methods for composite flour intended for human consumption.

This standard does not apply where there are specific published standards for blends or composite flours.

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 952.13, *Arsenic in food. Silver diethyldithiocarbamate*

CODEX STAN 192, *General standard for food additives*

CODEX STAN 193, *Codex general standards 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 744, *Cassava and cassava products — Determination of total cyanogens — Enzymatic assay method*

EAS 900, *Cereals pulses and their products — Sampling*

EAS 901, *Cereals pulses and their products — Test methods*

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 5498, *Agricultural food products — Determination of crude fibre content — General method*

ISO 5506, *Soya bean products — Determination of urease activity*

ISO 5985, *Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid*

ISO 6561-1, *Fruits, vegetables and derived products — Determination of cadmium content — Part 1: Method using graphite furnace atomic absorption spectrometry*

ISO 6561-2, *Fruits, vegetables and derived products — Determination of cadmium content — Part 2: Method using flame atomic absorption spectrometry*

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 6633, *Fruits, vegetables and derived products — Determination of lead content — Flameless atomic absorption spectrometric 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 7305, *Milled cereal products — Determination of fat acidity*

ISO 9648, *Sorghum — Determination of tannin content*

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 feedstuffs — 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.

3.1
composite flour
product obtained by blending of flour prepared from food plants and/or their products or grains/seeds before milling

3.2
sound/wholesome
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

3.3
practically free
without defects in excess of those that can be expected to result from, and be consistent with good cultural and handling practices employed in the production and marketing of the composite flour

3.4
foreign matter
organic and inorganic material other than composite flour

3.5
food grade packaging material
material which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product

3.6
filth
impurities of animal origin including dead insects

4 Requirements

4.1 Raw materials and ingredients

The food plants or their products from which the flour is milled shall be clean, sound, and practically free from foreign matter. The raw materials shall comply with the relevant East African Standards.

4.2 General requirements

Composite flour shall be:

a) practically free from foreign matter;

b) free from off-flavours and off-odours; and

c) practically free from any living insects and filth;

d) be wholesome and fit for human consumption.

4.3 Specific requirements

Composite flour shall comply with the limits given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for composite flour

S/No	Characteristic	Requirement	Test method
i	Moisture content, % m/m, max.	14	EAS 901
ii	Crude fibre on moisture free basis, % m/m, max.	5.0	ISO 5498
iii	Acid insoluble ash on moisture free basis, % m/m, max.	0.40	ISO 5985

4.4 Hydrocyanic acid content

If cassava is used as a component of the composite flour, the total hydrocyanic acid content of composite flour shall not exceed 10 mg/kg, when tested in accordance with EAS 744.

4.5 Antinutritional factors

If soya flour is used as a component of the composite flour, urease activity in the composite flour shall not exceed 0.3 mg N/g/min (for trypsin inhibitor activity, 5 mg/g) when tested in accordance with ISO 5506.

If sorghum flour is used as a component of the composite flour, the tannin content of the composite flour shall not exceed 0.3 % by mass on a dry matter basis when tested in accordance with ISO 9648.

5 Food additives

Food additives may be used in the preparation of composite flour in accordance with CODEX STAN 192.

6 Hygiene

6.1 Composite flour shall be prepared and handled in a hygienic manner in accordance with EAS 39.

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

Table 2 — Microbiological limits for composite flour

S/N	Microorganism	Limit	Test method
ii	*Escherichia coli* per g	Absent	ISO 16649-2
iii	*Salmonella* per 25 g	Absent	ISO 6579-1
iv	Yeast and moulds cfu/g, max.	10^4	ISO 21527-2
v	*Staphylococcus aureus* cfu/g, max., max.	10^2	ISO 6888-1

7 Contaminants

7.1 Pesticide residues

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

7.2 Heavy metals

Composite flour shall comply with the heavy metal limits given in Table 3 when tested in accordance with test methods specified therein.

Table 3 — Heavy metal limits for composite flour

S/N	Heavy metal	Maximum limit mg/kg	Test method
ii	Lead (Pb)	0.2	ISO 6633
iii	Cadmium (Cd).	0.1	ISO 6561-1 ISO 6561-2

7.3 Mycotoxins

Composite flour shall comply with the mycotoxin limits given in Table 4 when tested in accordance with test methods specified therein.

Table 4 — Mycotoxin limits for composite flour

S/N	Mycotoxin	Maximum limit µg/kg	Test method
i	Total aflatoxins	10	EAS 901
ii	Aflatoxin B1	5	
iii	Fumunisins	2 000	

7.4 Other contaminants

Composite flour shall comply with the maximum levels given in CODEX STAN 193.

8 Weights and measures

Composite flour shall be packaged in accordance with the Weights and measures regulations of the destination country.

NOTE EAC Partner States are signatory to the International Labour Organizations (ILO) for maximum package weight of 50 kg where human loading and offloading is involved.

9 Packaging

Composite flour shall be packaged in food grade material to safeguard the safety, hygienic, nutritional and organoleptic qualities of the product.

10 Labelling

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

a) common name of product as “Composite flour”;

b) name and address of the manufacturer/packer/importer;

c) brand name and/or registered trade mark;

d) date of manufacture;

e) list of ingredients;

f) lot identification;

g) net weight in SI units;

h) expiry date;

i) country of origin;

j) storage instruction as “Store in a cool dry place away from any contaminants”; and

k) instructions for disposal of used package.

10.2 When labelling non-retail packages, information for non-retail packages shall either be given on the packages or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer or packer shall appear on the package.

11 Sampling

Sampling shall be done in accordance with EAS 900.

Bibliography

EAS 782:2019, *Composite flour — Specification*.