



DEAS1270:2025

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DRAFT EAST AFRICAN STANDARD

Rye grains — 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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Rye grains— Specification

1.0 Scope

This draft East Africa Standard specifies the requirements, sampling and test methods for common rye (*Secale cereale* L.) 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*

3.0 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 rye grains

grain of common rye (*Secale cereale* L.)

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 rye grain, broken kernels and other grain

3.5 inorganic matter

stones, glass, pieces of soil and other mineral matter

3.6 organic matter

any animal or plant matter (seed coats, straws, weeds) other than grain of rye, damaged rye grain, other grain, inorganic extraneous matter and harmful/toxic seeds

3.7

ergot

sclerotium of the fungus *Claviceps purpurea*

3.8

filth

impurities of plant and animal origin including dead insects, rodent hair and excreta

3.9

test weight

the weight of a hundred litre volume of rye grains expressed as kilograms per hectolitre

3.10

damaged kernels

kernels, pieces of rye kernels, and other grains that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged

3.11

insect bored kernels

kernels which have been visibly bored or tunnelled by insects.

3.12

defective/damaged grain

pest damaged, discoloured, stained, rotten and diseased, immature and shrivelled grain and broken grain

3.13

pest damaged grain

grain which shows damage or owing attack by rodents, insects, mites or other pests

3.14

broken rye grains

pieces of rye grains that are less than three-quarters of a whole kernel and include grains of rye grains in which part of the endosperm is exposed or rye grains without a germ. If the piece is more than three-quarters of a grain, it is considered as whole grain.

3.15

food grade packaging material

material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

3.16

other grain

edible grain, whole or broken, other than rye, that is, cereals, pulses and other edible legumes

4.0 Requirements

4.1 General requirements

4.1.1 Rye grains shall be:

- a) clean, wholesome, uniform in appearance,
- b) characteristic colour of rye grains
- c) free from abnormal flavour, musty, or other undesirable odour;
- d) free from live pests; and
- e) free from Toxic or noxious seeds in amounts which may represent a hazard to human health. NOTE: An indicative list of these seeds is given in Annex A

4.2 Specific requirements

Rye grains shall comply with the maximum limits given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for Rye grains

| S/No. | Characteristic | Limit | Test method |
|-------|---|-------|-------------|
| i. | Protein content %m/m min | 8 | EAS 901 |
| ii. | Test weight kg/h, min | 46 | |
| iii. | Organic matter, % m/m, max | 1.5 | |
| iv. | Inorganic matter, % m/m, max | 0.5 | |
| v. | Shrunken and Broken kernels Broken kernels % m/m max | 5.0 | |
| vi. | Edible grains other than rye grains, % m/m max | 2.0 | |
| vii. | Damaged kernels, % m/m max | 3.0 | |
| viii. | Pest damaged grains , % m/m max | 0.5 | |
| ix. | Wild rye grains% m/m max | 0.2 | |
| x. | Ergot, % m/m, max. | 0.05 | |
| xi. | filth, % m/m, max. | 0.1 | |
| xii. | Moisture, % m/m, max | 14 | |

5.0 Hygiene

Rye grains shall be produced, prepared and handled in accordance with EAS 39

6.0 Contaminants

6.1 Pesticide residues

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

6.2 Heavy metals

Rye grains shall be free from heavy metals in amounts which may represent a hazard to health. If present, they shall not exceed the limits established in CXS 193

6.3 Mycotoxin

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

Table 2 — Mycotoxin limits for Rye grains

| 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 | |
| iii. | Ochratoxin A, $\mu\text{g/kg}$ | 5 | |

7.0 Packaging

Rye grains 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 “rye grains”;
- 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’;
- crop year;
- best before date;

- j) instructions for use and on disposal of used package; and
- k) country of origin.
- l) Declaration of GMO, where applicable

8.2 Labelling of non-retail containers

Information detailed in 8.1 shall be given either on the container or in accompanying documents, except that the name of the product, lot identification and the name and address of the processor or packer as well as storage instructions, shall appear on the container.

However, lot identification and the name and address of the processor or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

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

9.0 Sampling

Sampling shall be done in accordance with EAS 900

Annex A
(informative)

List of harmful and toxic seeds

A.1 Toxic seeds

Botanical name

Acroptilon repens (L.)DC.
Agrostemma githago L.
Coronilla varia L.
Crotalaria spp.
Datura fastuosa L.
Datura stramonium L.
Heliotropium lasiocarpum Fisher et C.A.
Lolium temulentum L.
Ricinus communis L.
Sophora alopecuroides L.
Sophora pachycarpa Schrank ex C.A. Meyer
Thermopsis montana
Thermopsis lanceolata R. Br. In Aiton
Trichoderma incanum

Common name

Corn-cockle
Coronilla, Crown vetch
Crotalaria

Stramony, thorn apple
Meyer Heliotrope
Darnel
Castor-oil plant
Stagger bush, Russian centaury

Buffalo pen

A.2 Harmful seeds

Botanical name

Allium sativum L.
Cephalaria syriaca (L.) Roemer et Shultes
Melampyrum arvense L.
Melilotus spp.
Sorghum halepense (L.) Pers.
Trogonella foenum-graecum L.

Common name

Garlic
Teasel
Cow-cockle
Melilot
Johnson grass
Fenugreek

NOTE This is a non-exhaustive list which can be augmented as necessary

Bibliography

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