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DRAFT EAST AFRICAN STANDARD

Milled rice — Specification

EAST AFRICAN COMMUNITY

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East African Community
P.O.Box 1096
Arusha
Tanzania
Tel: 255 27 2504253/8
Fax: 255 27 2504481/2504255
E-mail: eac@eachq.org
Web: www.eac-quality.net

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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 128:2017 was prepared by Technical Committee EASC/TC 014, *Cereals, Pulses and related products*

This fourth edition cancels and replaces the third edition (EAS 128:2017) which has been technically revised.

Milled rice — Specification

1 Scope

This East African Standard specifies requirements, sampling and test methods for milled rice of the varieties grown from rice grains, (*Oryza spp.*) intended for human consumption.

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.

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

EAS 38, *Labelling of pre-packaged foods — Requirements*

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

EAS 764, *Rough (paddy) rice — Specification*

EAS 765, *Brown rice — Specification*

EAS 900, *Cereals and pulses — Sampling*

EAS 901, *Cereals and pulses — Test methods*

3 Terms and definitions

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

3.1

milled rice

whole or broken kernels of rice (*Oryza spp.*) from which the germ, embryo or at least the outer bran layer have been removed

3.2

bran

by-product from milling consisting of the outer (pericarp) layers of the kernel with part of the germ

3.3

broken kernels

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

3.4**chalky kernels**

head rice or broken kernel, except wax rice, whose whole surface has an opaque and floury appearance

3.5**damaged rice**

pest damaged, discoloured, stained, diseased and frost damaged

3.6**foreign matter**

all organic and inorganic material

3.6.1**inorganic matter**

stones, glass, pieces of soil and other mineral matter

3.6.2**organic matter**

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

3.7**filth**

impurities of animal origin

3.8**head rice**

whole kernel or part of the kernel with a length greater than or equal to 75 % of the average length of the test sample kernels (see Figure 1)

3.9**immature**

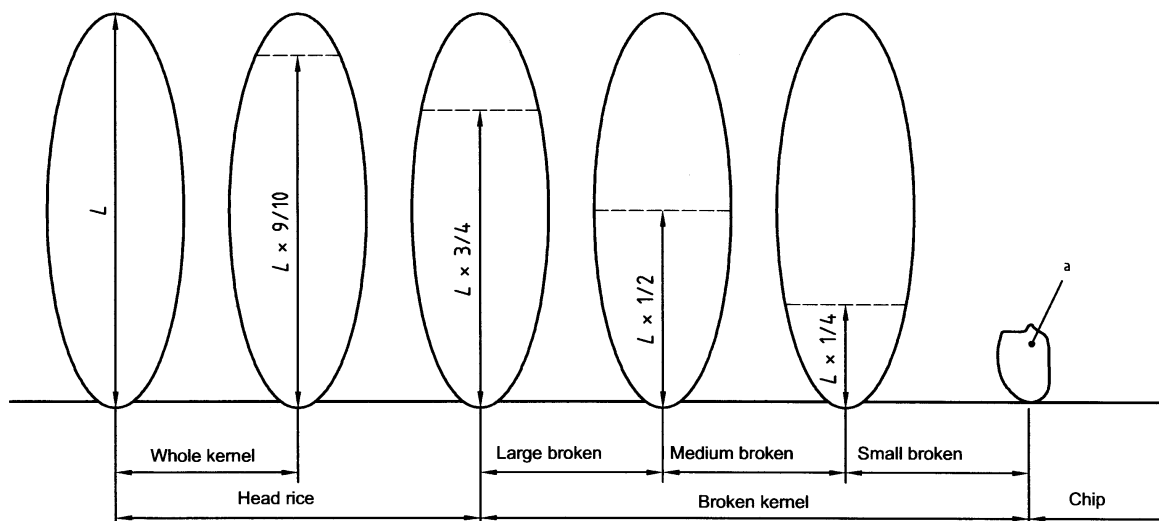
unripe and/or undeveloped whole or broken kernel

3.10**pest damaged grains**

grains which show damage owing to attack by rodents, insects, mites or other pests

3.11**large broken kernel**

part of kernel with a length less than three-quarters but greater than one half of the average length of the test sample kernels



Key

a Not passing through a round perforation of 1.4 mm in

diameter L is the average length

Figure 1 — Size of kernels, broken kernels and chips

3.12

medium broken kernel

part of kernel with a length less than or equal to one half but greater than one quarter of the average length of the test sample kernels (see Figure 1)

3.13

paddy rice

whole or broken unhulled kernels of rice

3.14

toxic and/or harmful seeds

seeds which can have a damaging or dangerous effect on health, sensory properties or technological performance

3.15

red kernel

head rice or broken kernel having a red bran covering more than 25 % of its surface

3.16

red-streaked kernel

head rice or broken kernel with red bran streaks of length greater than or equal to 50 % of that whole kernel, but where the surface covered by these red streaks is less than 25 % of the total surface

3.17

food grade packaging material

packaging 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

3.18

other contrasting varieties

whole or broken kernels of rice with distinct grain characteristics in size, shape and aroma from the designated variety

3.19**brown (husked) rice**

rice from which only the outermost layer (husk) of a grain has been removed

3.20**parboiled rice**

husked or milled rice processed from paddy or husked rice that has been soaked in water and subjected to a heat treatment so that the starch is fully gelatinized followed by a drying process

4 Classification

Rice shall be classified as long grain, medium grain or short grain. The classification shall be done in accordance with one of the following specifications:

- a) Option 1 (kernel length/width ratio):
 - i) long grain rice: milled rice with a length/width ratio of 3.0 or more;
 - ii) medium grain rice: milled rice with a length/width ratio of 2.0 – 2.9; and
 - iii) short grain rice: milled rice with a length/width ratio of 1.9 or less;
- b) Option 2 (kernel length):
 - i) long grain rice with a kernel length of 6.6 mm or more;
 - ii) medium grain rice with a kernel length of 6.2 mm or more but less than 6.6 mm; and
 - iii) short grain rice with a kernel length of less than 6.2 mm;
- c) Option 3 (combination of the kernel length and the length/width ratio):
 - i) long grain rice with either:
 - kernel length of more than 6.0 mm and with a length/width ratio of more than 2 but less than 3; or
 - kernel length of more than 6.0 mm and with a length/width ratio of 3 or more;
 - ii) medium grain rice with a kernel length of more than 5.2 mm but not more than 6.0 mm and a length/width ratio of less than 3; and
 - iii) short grain rice with a kernel length of 5.2 mm or less and a length/width ratio of less than 2.

5 Quality requirements**5.1 General requirements**

5.1.1 Milled rice shall be obtained from rough or brown rice complying with EAS 764 or EAS 765 respectively.

5.1.2 Milled rice shall be:

- a) clean, wholesome, uniform in size, colour and shape;
- b) safe and suitable for human consumption;
- c) free from abnormal flavour, musty, or other undesirable odour and objectionable smell; and
- d) free from live pests.

5.2 Specific requirements

Milled rice 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 milled rice

| S/N | Characteristic | Maximum limit | | | Test method EAS 901 |
|-------|------------------------------------|---------------|---------|---------|------------------------|
| | | Grade 1 | Grade 2 | Grade 3 | |
| i. | Broken kernels, % m/m | 5 | 15 | 25 | Clause 4 |
| ii. | Damaged rice, % m/m | 1.5 | 2 | 3.0 | |
| iii. | Chalky and immature kernels, % m/m | 2 | 4 | 10 | |
| iv. | Red or red-streaked kernels, % m/m | 8 | | | |
| v. | Other contrasting varieties, % m/m | 3 | | | |
| vi. | Foreign matter, % m/m | 0.5 | | | |
| vii. | Inorganic matter, % m/m | 0.1 | | | |
| viii. | Paddy/husked rice, % m/m | 0.3 | | | |
| ix. | Filth, % m/m | 0.1 | | | |
| x. | Moisture content, % m/m | 14 | | | |

Note: In order for rice to be considered under a specific grade, the first three parameters shall be met, and when rice does not comply with any of the three parameters, it shall be considered as the next relevant grade.

6 Contaminants

6.1 Pesticide residues

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

6.2 Heavy metals

6.2.1 Milled rice shall comply with limits for heavy metals specified in CODEX STAN 193 established by Codex Alimentarius Commission.

6.2.2 Milled rice shall comply with limits for mycotoxins given in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Mycotoxin limits for milled rice

| S/N | Mycotoxin | Maximum limit | Test method EAS 901 |
|-----|---|---------------|------------------------|
| i. | Total aflatoxins (AFB1+AFB2+AFG1 +AFG2)), µg/kg | 10 | Clause 9 or 10 |
| ii. | Aflatoxin B1, µg/kg | 5 | |

7 Hygiene

Milled rice shall be produced, prepared and handled in accordance with EAS 39.

8 Weights and measures

Milled rice shall be packaged in accordance with the weights and measures regulations of the destination country.

9 Packaging

9.1 Milled rice shall be packed in food grade packaging materials which will safeguard the hygienic, nutritional, and organoleptic qualities of the products.

9.2 Each package shall be securely closed and sealed.

10 Labelling

10.1 Labelling of retail containers

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

- a) product name as “Milled rice”;
- b) classes:
 - i) long grain milled rice;
 - ii) medium grain milled rice; and
 - iii) short grain milled rice;
- c) name, address and physical location of the manufacturer/packer/importer;
- d) batch number;
- e) net weight, in metric unit ;
- f) the declaration “Food for human consumption”;
- g) storage instruction as “Store in a cool dry place away from any contaminants”;
- h) crop year;
- i) packing date;

- j) instructions on disposal of used package;
- k) country of origin; and
- l) a declaration on whether the milled rice was genetically modified or not.
- m) best before date

10.2 Labelling of non-retail containers

Information in 9.1 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.

11 Sampling

Sampling shall be done in accordance with EAS 900.

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