DRAFT TANZANIA STANDARD

Rice flour - Specification

TANZANIA BUREAU OF STANDARDS

0. Forward

Rice Flour are obtained from either *Avena byzantina* or *Avena sativa* a tall, erect annual cereal grass up to 1.5 m. rice flour obtained from grinding milled rice of the varieties grown from rice grains, *Oryza spp*. intended for human consumption. It is widely grown as a food grain and fodder in temperate and sub-tropical regions. It also does well in the high-altitude tropics.

Rice flour have numerous uses in food; most commonly, are in confectionaries, cooking and noodles.

Development of this Tanzania standard was necessitated by the need to ensure the safety and quality of rice flour being produced and or marketed in Tanzania as well as for import and export markets.

In preparation of this draft Tanzania standard assistance was drawn from Japanese s*tandard for rice flour.*

In reporting the result of a test or analysis made in accordance with the Tanzania standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4: (see clause 2).

1.0 Scope

This draft Tanzania Standard specifies requirements, methods of sampling and test for rice flour obtained from grinding milled rice of the varieties grown from rice grains, *Oryza spp*. intended for human consumption.

2.0 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

TZS 109, General principles of food hygiene

TZS 122, Microbiology of food and feeding stuffs – Horizontal method for the detection of salmonella spp

TZS 125, 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 – Amendment 1\: Inclusion of precision data

TZS 131, Microbiology of food and animal feeding stuff\: General guidance for enumeration of yeasts and moulds\- Colony Count technique at 25oC

TZS 268 General atomic absorption spectrophotometric method for determination of lead in food and food stuffs.

TZS 330, Cereals – Sampling of milled products

TZS 331, Cereals and pulses — Test methods

TZS 538, Labelling of pre-packaged foods — Requirements
TZS 592, Milled rice - Specification

TZS 729-2 Microbiology of food and animal feeding stuffs –Horizontal method for the enumeration of coliforms – Colony count technique

TZS 730, Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of \-b\-glucuronidase\-positive Escheria coli – Part 2 – Colony\-count technique at 44 0C using 5\-bromo\-4\-chloro\-3\-indolyl\-b\-D\-glucuronide

TZS 1316, Spices and Condiments - Determination of total ash

TZS 1317, Spices and Condiments \- Determination of acid insoluble ash

TZS 1331, Animal and vegetable fats and oils – determination of acid value and acidity

TZS 1490 Fruits, vegetables and derived products – Sampling and method of test – Part 4\: Determination of mineral impurities content

TZS 1502 Fruits, vegetables and derived products – Sampling and methods of test Part 14\: Determination of arsenic content \- Silver diethyldithocarbamate spectrophotometric methodTZS 1495 Fruits, vegetables and derived products — Determination of copper content — Method using flame atomic absorption spectrometry.

TZS 1675, Rough (paddy) rice — Specification

TZS 1676, Brown rice — Specification

3.0 Terms and definitions

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

3.1
milled rice
whole or broken kernels of rice (*Oryza* spp) from which all or part of the germ and the outer bran layer have been removed.

3.2
rice flour
powder obtained from grinding milled rice.

3.3
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.

3.4
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

3.5
clean
practically free from visible soil, dust, or other visible foreign matter

3.6
foreign matter/ extraneous matter.

all organic and inorganic material other than rice flour.

3.7
inorganic matter
stones, glass, pieces of soil and other mineral matter

3.8
organic matter
any animal or plant matter (seed coats, straws, weeds) other than rice flour

3.9
filth
impurities of plant and animal origin including dead insects, rodent hair and excreta

4 Requirements

4.1 General requirements

4.1.1 Rice flour shall be obtained from ground milled rice**,** complying with TZS 592**.**
4.1.2 Rice flour shall be:

a) clean, wholesome, uniform fine granulation,
b) characteristic colour of rice
c) safe and suitable for human consumption;
d) free from abnormal flavour, musty, or other undesirable odour.; and
e) free from live pests
f) powdery consistency.

4.1.3 Rice flour at least 98% shall pass through 50mesh (0.297mm) sieve size.

4.2 Specific requirements

Rice flour 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 Rice flour

S/N	Characteristic	limit	Test method
i.	Protein min.) N x 6.25 % m/m	5.0	TZS 331 Clause 4
ii.	Crude fibre, % m/m, max.	1.0	
iii.	Total ash, % m/m, max.	1.0	TZS 1316
iv.	Acid insoluble ash, % m/m, max.	0.2	TZS1317
v.	Fat acidity, mg KOH per 100 g of product, on dry mass basis, max.	80	TZS1331
vi.	Crude fat on moisture free basis, % m/m, max.	1.0	

vii.	Moisture, % m/m, max	14	TZS 331 Clause 5

5.0
Hygiene
5.1 Rice flour shall be produced, prepared and handled in accordance with TZS 109
5.2 Rice 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 rice flour

S/N	Micro-organism	limit (max)	Test method
i.	Total aerobic count, cfu / g,max	10^5	TZS 729-2
ii.	*Escherichia coli*, cfu/g, max	Absent	TZS 730
iii.	*Salmonella*, in 25 g	Absent	TZS 122
iv.	Yeast and moulds, cfu/g, max	10^4	TZS 131
v.	*Staphylococcus aureus*, / 25 g,max	10^2	TZS 125

6.0 Contaminants

6.1 Pesticide residues
Rice flour shall comply with pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

6.2 Heavy metals
Rice flour 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 Table 3.

Table 3 Heavy metal limits for rice flour

S/N	Heavy metal	Limit (max) mg/kg	Methods of test
i)	Lead (Pb), ,	0.2	TZS 268
ii)	Cadmium (Cd),	0.1	TZS 1490
iii)	Arsenic (As),	0.1	TZS 1502

6.3 Mycotoxin

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

Table 4 — Mycotoxin limits for Rice flour

S/N	Mycotoxin	limit (max)	Test method
i.	Total aflatoxins µg/kg	10	TZS 331
ii.	Aflatoxin B_1, µg/kg	5	

7 Weights and measures

Rice flour shall be packaged in accordance with the weights and measures regulations of the destination country.

8.0 Packing, marking and labeling

8.1 Packing

8.1.1 Rice flour shall be packed in food grade packaging materials which will safeguard the hygienic, nutritional and organoleptic qualities of the products.

8.1.2 Each package shall be securely closed and sealed.

8.2 Marking and Labelling

In addition to the requirements in TZS 538, each package shall be legibly and indelibly labelled with the following:

a) product name as “rice flour”;
b) color and variety/common name;
c) name, address and physical location of the producer/ packer/importer;
d) lot/batch/code number;
e) net weight, in metric units;
f) the declaration “Food for Human Consumption’’;
g) storage instruction’;
h) date of manufature;
i) expire date;
j) instructions for use and on disposal of used package; and
k) country of origin.

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

NOTE – The TBS Standards Mark of Quality may be used by the manufacturers only under licence from TBS. Particulars of conditions under which the licences are granted, may be obtained from TBS.

10 Sampling

Sampling shall be done in accordance with TZS 330