Food and Agriculture Organization of the United Nations

World Health Organization

CODEX ALIMENTARIUS
INTERNATIONAL FOOD STANDARDS

CODEX ALIMENTARIUS
STANDARD

STANDARD FOR RICE
CXS 198-1995

ADOPTED 1995
AMENDED 2025

CXS 198-1995

History of the standard

2025 Amendments

Following decisions taken at the Forty-eighth Session of the Codex Alimentarius Commission in November 2025, amendments were made in Section 4: "Food additives" to align with the *General standard for food additives* (CXS 192-1995).

This publication was redesigned and published in 2025.

Amendments made prior to 2025:

Amended in 2019.

Adopted in 1995.

1 Scope

This standard applies to husked rice, milled rice and parboiled rice, all for direct human consumption; i.e. ready for its intended use as human food, presented in packaged form or sold loose from the package directly to the consumer. It does not apply to other products derived from rice or to glutinous rice.

2 Description

2.1 Definitions

a) **Rice** is whole and broken kernels obtained from the species *Oryza sativa* L.

b) **Paddy rice** is rice which has retained its husk after threshing.

c) **Husked rice** (brown rice or cargo rice) is paddy rice from which the husk only has been removed. The process of husking and handling may result in some loss of bran.

d) **Milled rice** (white rice) is husked rice from which all or part of the bran and germ have been removed by milling.

e) **Parboiled rice** may be 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.

f) **Glutinous rice; waxy rice:** kernels of special varieties of rice which have a white and opaque appearance. The starch of glutinous rice consists almost entirely of amylopectin. It has a tendency to stick together after cooking.

3 Essential composition and quality factors

3.1 Quality factors – general

Rice shall be safe and suitable for human consumption.

Rice shall be free from abnormal flavours, odours, living insects and mites.

3.2 Quality factors – specific

3.2.1 Moisture content – 15 percent m/m max

Lower moisture limits should be required for certain destinations in relation to the climate, duration of transport and storage.

3.2.2 **Extraneous matter**: is defined as organic and inorganic components other than kernels of rice.

a) **Filth**: impurities of animal origin (including dead insects) 0.1% m/m max

b) **Other organic extraneous matter** such as foreign seeds, husk, bran, fragments of straw, etc. shall not exceed the following limits:

	Maximum level
Husked rice	1.5% m/m
Milled rice	0.5% m/m
Husked parboiled rice	1.5% m/m
Milled parboiled rice	0.5% m/m

c) **Inorganic extraneous matter** such as stones, sand, dust, etc. shall not exceed the following limits:

	Maximum level
Husked rice	0.1% m/m
Milled rice	0.1% m/m
Husked parboiled rice	0.1% m/m
Milled parboiled rice	0.1% m/m

4 Food additives

Only certain carriers as indicated in Table 1 and Table 2 of the *General standard for food additives* (CXS 192-1995)[1] are permitted for use in nutrient fortified rice conforming to this standard.

5 Contaminants

5.1 Heavy metals

The products covered by the provisions of this standard shall be free from heavy metals in amounts which may represent a hazard to human health.

5.2 Pesticide residues

Rice shall comply with those maximum residue limits established by the Codex Alimentarius Commission (CAC) for this commodity.

6 Hygiene

It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the *General principles of food hygiene* (CXC 1-1969),[2] and other codes of practice recommended by the CAC which are relevant to this product.

To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms, including fungi, in amounts which may represent a hazard to health.

7 Packaging

Rice shall be packaged in containers which will safeguard the hygienic, nutritional, technological and organoleptic qualities of the food.

The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They should not impart any toxic substance or undesirable odour or flavour to the product.

When the product is packaged in sacks, these must be clean, sturdy and strongly sewn or sealed.

8 Labelling

In addition to requirements of the *General standard for the labelling of pre-packaged foods* (CXS 1-1985),[3] the following specific provisions apply:

8.1 Name of the product

The name of the product to be shown on the label shall be in accordance with the definitions given in Section 2.1: "Definitions". The alternative names given in parenthesis shall be used in accordance with local practice.

8.2 Labelling of non-retail containers

Information on non-retail containers 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 manufacturer or packer shall appear on the container. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9 Methods of analysis and sampling

For checking compliance with this standard, the methods of analysis and sampling contained in the *Recommended methods of analysis and sampling* (CXS 234-1999)[4] relevant to the provisions in this standard shall be used.

ANNEX I

1 Classification

If rice is classified as long grain, medium grain or short grain, the classification should be in accordance with one of the following specifications. Traders should indicate which classification option is chosen.

1.1 Option 1: kernel length/width ratio

1.1.1 Long grain rice

a) Husked rice or parboiled husked rice with a length/width ratio of 3.1 or more.

b) Milled rice or parboiled milled rice with a length/width ratio of 3.0 or more.

1.1.2 Medium grain rice

a) Husked rice or parboiled husked rice with a length/width ratio of 2.1–3.0.

b) Milled rice or parboiled milled rice with a length/width ratio of 2.0–2.9.

1.1.3 Short grain rice

a) Husked rice or parboiled rice with a length/width ratio of 2.0 or less.

b) Milled rice or parboiled milled rice with a length/width ratio of 1.9 or less.

1.2 Option 2: the kernel length

a) **Long grain rice** has a kernel length of 6.6 mm or more.

b) **Medium grain rice** has a kernel length of 6.2 mm or more but less than 6.6 mm.

c) **Short grain rice** has a kernel length of less than 6.2 mm.

1.3 Option 3: a combination of the kernel length and the length/width ratio

a) **Long grain rice** has either:

i) a kernel length of more than 6.0 mm and with a length/width ratio of more than 2 but less than 3; or

ii) a kernel length of more than 6.0 mm and with a length/width ratio of 3 or more.

b) **Medium grain rice** has 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.

c) **Short grain rice** has a kernel length of 5.2 mm or less and a length/width ratio of less than 2.

2 Milling degree

a) **Milled rice** (white rice) may be further classified into the following degrees of milling:

b) **Undermilled rice** is obtained by milling husked rice but not to the degree necessary to meet the requirements of well-milled rice.

c) **Well-milled rice** is obtained by milling husked rice in such a way that some of the germ and all the external layers and most of the internal layers of the bran have been removed.

d) **Extra well-milled rice** is obtained by milling husked rice in such a way that almost all of the germ, all of the external layers and the largest part of the internal layers of the bran, and some of the endosperm, have been removed.

3 Optional ingredients

Nutrients

Vitamins, minerals and specific amino acids may be added in conformity with the legislation of the country in which the product is sold.

4 Other quality factors

In those instances where more than one factor limit and/or method of analysis is given, it is strongly recommended that users specify the appropriate limit and method of analysis.

Factor/Description		Limit				Method of analysis
4.1	**Whole kernel** is a kernel without any broken part.					
4.1a	***Head rice*** is a kernel, the length of which is equal to or greater than three quarters of the average length of the corresponding whole kernel.	buyer preference				ISO 7301 (Annex A)
4.1b	***Large broken kernels*** are fragments of kernel, the length of which is less than three-quarters but greater than one-half of the average length of a corresponding whole kernel.	buyer preference				ISO 7301 (Annex A)
4.1c	***Medium broken kernels*** are fragments of kernel, the length of which is equal to or less than one-half but greater than one-quarter of the average length of a corresponding whole kernel.	buyer preference				ISO 7301 (Annex A)
4.1d	***Small broken kernels*** are fragments of kernel, the length of which is equal to or less than one-quarter of the average length of a corresponding whole kernel, but which does not pass through a metal sieve with round perforation 1.4 mm in diameter.	buyer preference				ISO 7301 (Annex A)
4.1e	***Chips*** are fragments of kernels which pass through a metal sieve with round perforations 1.4 mm in diameter.	0.1% m/m				ISO 7301 (Annex A)
4.2	**Defective kernels**	**Husked rice**	**Milled rice**	**Husked parboiled rice**	**Milled parboiled rice**	
4.2a	***Heat-damaged kernels*** are kernels, whole or broken, that have changed their normal colour as a result of heating. This category includes whole or broken kernels that are yellow due to alteration. Parboiled rice in a batch of non-parboiled rice is also included in this category.	4.0% m/m*	3.0% m/m	8.0% m/m*	6.0% m/m	ISO 7301 (Annex A)

Factor/Description		Limit				Method of analysis
4.2b	***Damaged kernels*** are kernels, whole or broken, showing obvious deterioration due to moisture, pests, diseases or other causes, but excluding heat-damaged kernels.	4.0% m/m	3.0% m/m	4.0% m/m	3.0% m/m	ISO 7301 (Annex A)
4.2c	***Immature kernels*** are unripe and/or undeveloped whole or broken kernels.	12.0% m/m	2.0% m/m	12.0% m/m	2.0% m/m	ISO 7301 (Annex A)
4.2d	***Chalky kernels*** are whole or broken kernels except for glutinous rice, of which at least three-quarters of the surface has an opaque and floury appearance.	11.0% m/m*	11.0% m/m	N/A	N/A	ISO 7301 (Annex A)
4.2e	***Red kernels*** are whole or broken kernels with a red-coloured pericarp covering more than one-quarter of their surface.	12.0% m/m	4.0% m/m	12.0% m/m	4.0% m/m	ISO 7301 (Annex A)
4.2f	***Red-streaked kernels*** are kernels, whole or broken, with red streaks, the lengths of which may be equal to or greater than one half of that of the whole kernel, but the surface area covered by these red streaks shall be less than one-quarter of the total surface.	N/A	8.0% m/m	N/A	8.0% m/m	ISO 7301 (Annex A)
4.2g	***Pecks*** are whole or broken kernels of parboiled rice of which more than one-quarter of the surface is dark brown or black in colour.	N/A	N/A	4.0% m/m*	2.0% m/m	ISO 7301 (Annex A)
4.3	**Maximum recommended levels of other types of rice**					ISO 7301 (Annex A)
	Paddy rice	2.5% m/m	0.3% m/m	2.5% m/m	0.3% m/m	
	Husked rice	N/A	1.0% m/m	N/A	1.0% m/m%	
	Milled rice	N/A	N/A	2.0% m/m	2.0% m/m%	
	Glutinous rice	1.0% m/m*	1.0% m/m	1.0% m/m*	1.0% m/m	

Note:

*After milling for control purposes.

Referenced texts

1 *General standard for food additives* (CXS 192-1995).

2 *General principles of food hygiene* (CXC 1-1969).

3 *General standard for the labelling of pre-packaged foods* (CXS 1-1985).

4 *Recommended methods of analysis and sampling* (CXS 234-1999).

Codex Alimentarius

A collection of international food standards developed to protect consumer health and ensure fair practices in the food trade. Codex standards are adopted by the Codex Alimentarius Commission, an intergovernmental body with 189 Members, established by FAO and WHO. The standards are recognized by the World Trade Organization as the benchmark for the safety of internationally traded food.

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