

United States Standards for Rough Rice

Effective September 11, 1995

*Note: Compliance with the provisions of these standards does not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or other Federal laws.
Source: 42 FR 40869, Aug. 12, 1977; 42 FR 64356, Dec. 23, 1977, unless otherwise noted.*

Terms Defined

868.201 Definition of rough rice

Rice (*Oryza sativa* L.) which consists of 50 percent or more of paddy kernels (see 868.202(i)) of rice.

868.202 Definition of other terms

For the purposes of these standards, the following terms shall have the meanings stated below:

- (a) **Broken kernels.** Kernels of rice which are less than three-fourths of whole kernels.
- (b) **Chalky kernels.** Whole or large broken kernels of rice which are one-half or more chalky.
- (c) **Classes.** The following four classes:

Long Grain Rough Rice
Medium Grain Rough Rice
Short Grain Rough Rice
Mixed Rough Rice

Classes shall be based on the percentage of whole kernels, large broken kernels, and types of rice.

(1) "Long grain rough rice" shall consist of rough rice which contains more than 25 percent of whole kernels and which after milling to a well-milled degree, contains not more than 10 percent of whole or broken kernels of medium or short grain rice.

(2) "Medium grain rough rice" shall consist of rough rice which contains more than 25 percent of whole kernels and which after milling to a well-milled degree, contains not more than 10 percent of whole or large broken kernels of long grain rice or whole kernels of short grain rice.

(3) "Short grain rough rice" shall consist of rough rice which contains more than 25 percent of whole kernels and which, after milling to a well-milled degree, contains not more than 10 percent of whole or large broken kernels of long grain rice or whole kernels of medium grain rice.

(4) "Mixed rough rice" shall consist of rough rice which contains more than 25 percent of whole kernels and which, after milling to a well-milled degree, contains more than 10 percent of "other types" as defined in paragraph (h) of this section.

(d) **Damaged kernels.** Whole or broken kernels of rice which are distinctly discolored or damaged by water, insects, heat, or any other means, and whole or large broken kernels of parboiled rice in non-parboiled rice. "Heat-damaged kernels" (see paragraph (e) of this section) shall not function as damaged kernels.

(e) **Heat-damaged kernels.** Whole or large broken kernels of rice which are materially discolored and damaged as a result of heating, and whole or large broken kernels of parboiled rice in nonparboiled rice which are as dark as, or darker in color than, the interpretive line for heat-damaged kernels.

(f) **Milling yield.** An estimate of the quantity of whole kernels and total milled rice (whole and broken kernels combined) that are produced in the milling of rough rice to a well-milled degree.

(g) **Objectionable seeds.** Seeds other than rice, except seeds of *Echinochloa crusgalli* (commonly known as barnyard grass, watergrass, and Japanese millet).

(h) **Other types.** (1) Whole kernels of: (i) Long grain rice in medium or short grain rice, (ii) medium grain rice in long or short grain rice, (iii) short grain rice in long or medium grain rice, and (2) Large broken kernels of long grain rice in medium or short grain rice and large broken kernels of medium or short grain rice in long grain rice.

Note: Broken kernels of medium grain rice in short grain rice and large broken kernels of short grain rice in medium grain rice shall not be considered other types.

(i) **Paddy kernels.** Whole or broken unhulled kernels of rice.

(j) **Red rice.** Whole or large broken kernels of rice on which there is an appreciable amount of red bran.

(k) **Seeds.** Whole or broken seeds of any plant other than rice.

(l) **Smutty kernels.** Whole or broken kernels of rice which are distinctly infected by smut.

(m) **Types of rice.** The following three types:

Long grain

Medium grain

Short grain

Types shall be based on the length 09 width ratio of kernels of rice that are unbroken and the width, thickness, and shape of kernels of rice that are broken as prescribed in FGIS instructions.

(n) **Ungelatinized kernels.** Whole or large broken kernels of parboiled rice with distinct white or chalky areas due to incomplete gelatinization of the starch.

(o) **Whole and large broken kernels.** Rice (including seeds) that (1) passes over a 6 plate (for southern production), or (2) remains on top of a 6 sieve (for western production).

(p) **Whole kernels.** Unbroken kernels of rice and broken kernels of rice which are at least three-fourths of an unbroken kernel.

(q) **6 sieve.** A metal sieve 0.032-inch thick, perforated with rows of round holes 0.0938 (6/64) inch in diameter.

(r) **6 plate.** A laminated metal plate 0.142-inch thick, with a top lamina 0.051-inch thick, perforated with rows of round holes 0.0938 (6/64) inch in diameter, and a bottom lamina 0.091-inch thick, without perforations.

[42 FR 40869, Aug. 12, 1977; 42 FR 64356, Dec. 23, 1977, as amended at 47 FR 34516, Aug. 10, 1982; 54 FR 21403, May 18, 1989; 54 FR 51344, Dec. 14, 1989]

Principles Governing Application of Standards

868.203 Basis of determination

The determination of seeds, objectionable seeds, heat-damaged kernels, red rice and damaged kernels, chalky kernels, other types, color, and the special grade Parboiled rough rice shall be on the basis of the whole and large broken kernels of milled rice that are produced in the milling of rough rice to a well-milled degree. When determining class, the percentage of (a) whole kernels of rough rice shall be determined on the basis of the original sample, and (b) types of rice shall be determined on the basis of the whole and large broken kernels of milled rice that are produced in the milling of rough rice to a well-milled degree. Smutty kernels shall be determined on the basis of the rough rice after it has been cleaned and shelled as prescribed in FGIS instructions, or by any method that is approved by the Administrator as giving equivalent results. All other determinations shall be on the basis of the original sample. Mechanical sizing of kernels shall be adjusted by handpicking as prescribed in FGIS instructions, or by any method that is approved by the Administrator as giving equivalent results.

[42 FR 40869, Aug. 12, 1977; 42 FR 64356, Dec. 23, 1977, as amended at 47 FR 34516, Aug. 10, 1982; 54 FR 21403, May 18, 1989]

868.204 Interpretive line samples

Interpretive line samples showing the official scoring line for factors that are determined by visual examinations shall be maintained by the Federal Grain Inspection Service, U.S. Department of Agriculture, and shall be available for reference in all inspection offices that inspect and grade rice.

[42 FR 40869, Aug. 12, 1977; 42 FR 64356, Dec. 23, 1977, as amended at 47 FR 34516, Aug. 10, 1982. Redesignated at 54 FR 21403, May 18, 1989]

868.205 Milling requirements

In determining milling yield (see 868.202(f)) in rough rice, the degree of milling shall be equal to, or better than, that of the interpretive line sample for "well-milled" rice.

[42 FR 40869, Aug. 12, 1977. Redesignated at 54 FR 21413, May 18, 1989]

868.206 Milling yield determination

Milling yield shall be determined by the use of an approved device in accordance with procedures prescribed in FGIS instructions. For the purpose of this paragraph, "approved device" shall include the McGill Miller No. 3 and any other equipment that is approved by the Administrator as giving equivalent results.

Note: Milling yield shall not be determined when the moisture content of the rough rice exceeds 18.0 percent.

[42 FR 40869, Aug. 12, 1977; 42 FR 64356, Dec. 23, 1977, as amended at 47 FR 34516, Aug. 10, 1982; Redesignated and amended at 54 FR 21403, May 18, 1989]

868.207 Moisture

Water content in rough rice as determined by an approved device in accordance with procedures prescribed in the FGIS instructions. For the purpose of this paragraph, "approved device" shall include the Motomco Moisture Meter and any other equipment that is approved by the Administrator as giving equivalent results.

[42 FR 40869, Aug. 12, 1977; 42 FR 64356, Dec. 23, 1977, as amended at 47 FR 34516, Aug. 10, 1982. Redesignated at 54 FR 21403, May 18, 1989; 54 FR 51344, Dec. 14, 1989]

868.208 Percentages

(a) **Rounding.** Percentages are determined on the basis of weight and are rounded as follows:

(1) When the figure to be rounded is followed by a figure greater than or equal to 5, round to the next higher figure; e.g., report 6.36 as 6.4, 0.35 as 0.4, and 2.45 as 2.5.

(2) When the figure to be rounded is followed by a figure less than 5, retain the figure; e.g., report 8.34 as 8.3 and 1.22 as 1.2.

(b) **Recording.** All percentages, except for milling yield, are stated in whole and tenth percent to the nearest tenth percent. Milling yield is stated to the nearest whole percent.

[54 FR 21403, May 18, 1989]

868.209 Information

Requests for the Rice Inspection Handbook, Equipment Handbook, or for information concerning approved devices and procedures, criteria for approved devices, and requests for approval of devices should be directed to the U.S. Department of Agriculture, GIPSA Federal Grain Inspection Service, P.O. Box 96454, Washington, DC 20090-6454, or any field office or cooperator.

[54 FR 21404, May 18, 1989]

Grades, Grade Requirements, and Grade Designations

868.210 Grades and grade requirements for the classes of Rough Rice

(See also 868.212.)

Grade	Maximum limits of--							Color requirements[1] (minimum)
	Seeds and heat-damaged kernels				Chalky kernels[1][2]			
	Total (singly or combined) (number in 500 grams)	Heat-damaged kernels and objectionable seeds (singly or combined) (number in 500 grams)	Heat-damaged kernels (number in 500 grams)	Red rice and damaged kernels (singly or combined) (percent)	In long grain rice (percent)	In medium or short grain rice (percent)	Other types [3] (percent)	
U.S. No. 1	4	3	1	0.5	1.0	2.0	1.0	Shall be white or creamy
U.S. No. 2	7	5	2	1.5	2.0	4.0	2.0	May be slightly gray.
U.S. No. 3	10	8	5	2.5	4.0	6.0	3.0	May be light gray.
U.S. No. 4	27	22	15	4.0	6.0	8.0	5.0	May be gray or slightly rosy.
U.S. No. 5	37	32	25	6.0	10.0	10.0	10.0	May be dark gray or rosy.
U.S. No. 6	75	75	75	15.0[4]	15.0	15.0	10.0	May be dark gray or rosy.

U.S. Sample grade shall be rough rice which: (a) does not meet the requirements for any of the grades from U.S. No. 1 to U.S. No. 6, inclusive; (b) contains more than 14.0 percent of moisture; (c) is musty, or sour, or heating; (d) has any commercially objectionable foreign odor; or (e) is otherwise of distinctly low quality.

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- [1] For the special grade Parboiled rough rice, see 868.212(b).
[2] For the special grade Glutinous rough rice, see 868.212(d).
[3] These limits do not apply to the class Mixed Rough Rice.
[4] Rice in grade U.S. No. 6 shall contain not more than 6.0 percent of damaged kernels.

[56 FR 55978, Oct. 31, 1991]

868.211 Grade designation

(a) The grade designation for all classes of rough rice, except Mixed Rough Rice, shall include in the following order: (1) The letters "U.S." (2) the number of the grade or the words "Sample grade", as warranted; (3) the words "or better" when applicable and requested by the applicant prior to inspection; (4) the class; (5) each applicable special grade (see 868.213); and (6) a statement of the milling yield.

(b) The grade designation for the class Mixed Rough Rice shall include, in the following order: (1) The letters "U.S."; (2) the number of the grade or the words "Sample grade," as warranted; (3) the words "or better," when applicable and requested by the applicant prior to inspection; (4) the class; (5) each applicable special grade (see 868.213); (6) the percentage of whole kernels of each type in the order of predominance; (7) the percentage of large broken kernels of each type in the order of predominance; (8) the percent of material removed by the No. 6 sieve or the No. 6 sizing plate; (9) when applicable, the percentage of seeds; and (10) a statement of the milling yield.

Note: Large broken kernels other than long grain, in Mixed Rough Rice, shall be certificated as "medium or short grain."

[42 FR 40869, Aug. 12, 1977, as amended at 54 FR 51344, Dec. 14, 1989]

Special Grades, Grade Requirements, and Grade Designations

868.212 Special grades and requirements

A special grade, when applicable, is supplemental to the grade assigned under 868.210 . Such special grades for rough rice are established and determined as follows:

(a) **Infested rough rice.** Tolerances for live insects for infested rough rice are defined according to sampling designations as follows:

(1) Representative sample. The representative sample consists of the work portion, and the file sample if needed and when available. The rough rice (except when examined according to paragraph (a)(3) of this section) will be considered infested if the representative sample contains two or more live weevils, or one live weevil and one or more other live insects injurious to stored rice or five or more other live insects injurious to stored rice.

(2) Lot as a whole (stationary). The lot as a whole is considered infested when two or more live weevils, or one live weevil and one or more other live insects injurious to stored rice, or five or more other live insects injurious to stored rice, or 15 or more live Angoumois moths or other live moths injurious to stored rice are found in, on, or about the lot.

(3) Sample as a whole during continuous loading/unloading. The minimum sample size for rice being sampled during continuous loading/unloading is 500 grams per each 100,000 pounds of rice. The sample as a whole is considered infested when a component (as defined in FGIS instructions) contains two or more live weevils, or one live weevil and one or more other live insects injurious to stored rice, or five or more other live insects injurious to stored rice.

(b) **Parboiled rough rice.** Parboiled rough rice shall be rough rice in which the starch has been gelatinized by soaking, steaming, and drying. Grades U.S. No. 1 to U.S. No. 6 inclusive, shall contain not more than 10.0 percent of ungelatinized kernels. Grades U.S. No. 1 and U.S. No. 2 shall contain not more than 0.1 percent, grades U.S. No. 3 and U.S. No. 4 not more than 0.2 percent, and grades U.S. No. 5 and U.S. No. 6 not more than 0.5 percent of nonparboiled rice. If the rice is: (1) Not distinctly colored by the parboiling process, it shall be considered "Parboiled Light"; (2) distinctly but not materially colored by the parboiling process, it shall be considered "Parboiled"; (3) materially colored by the parboiling process, it shall be considered "Parboiled Dark." The color levels for "Parboiled Light," "Parboiled," and "Parboiled Dark" rice shall be in accordance with the interpretive line samples for parboiled rice.

Note: The maximum limits for "Chalky kernels," "Heat-damaged kernels," "Kernels damaged by heat," and the "Color requirements" shown in 868.210 are not applicable to the special grade "Parboiled rough rice."

(c) **Smutty rough rice.** Smutty rough rice shall be rough rice which contains more than 3.0 percent of smutty kernels.

(d) **Glutinous rough rice.** Glutinous rough rice shall be special varieties of rice (*Oryza sativa* L. *glutinosa*) which contain more than 50 percent chalky kernels. Grade U.S. No. 1 shall contain not more than 1.0 percent of nonchalky kernels, grade U.S. No. 2 not more than 2.0 percent of nonchalky kernels, grade U.S. No. 3 not more than 4.0 percent of nonchalky kernels, grade U.S. No. 4 not more than 6.0 percent of nonchalky kernels, grade U.S. No. 5 not more than 10.0 percent of nonchalky kernels, and grade U.S. No. 6 not more than 15.0 percent of nonchalky kernels.

Note: The maximum limits for "Chalky kernels" in 868.210 are not applicable to the special grade "Glutinous rough rice."

(e) **Aromatic rough rice.** Aromatic rough rice shall be special varieties of rice (*Oryza sativa* L. scented) that have a distinctive and characteristic aroma; e.g., basmati and jasmine rice.

[42 FR 40869, Aug. 12, 1977, as amended at 54 FR 21406, May 18, 1989; 56 FR 55978, Oct. 31, 1991; 58 FR 68016, Dec. 23, 1993]

868.213 Special grade designation

The grade designation for infested, parboiled, smutty, glutinous, or aromatic rough rice shall include, following the class, the word(s) "Infested," "Parboiled Light," "Parboiled," "Parboiled Dark," "Smutty," "Glutinous," or "Aromatic," as warranted, and all other information prescribed in 868.211.

[58 FR 68016, Dec. 23, 1993]