



## Technical Specifications for PARBOILED RICE

Version: 1  
Replacing Version: **13.0**  
Date of issue: **05/07/2022**

Updates:

- Testing requirements of aflatoxins total, arsenic, ochratoxin
- Broken %: added as per contract

### 1. SCOPE

This specification is applied for Parboiled Rice – 20%, that WFP purchases and distributes to beneficiaries.

### 2. DEFINITIONS

**Rice** means non-glutinous and glutinous rice (*Oryza sativa* L.) in whatever form.

**Paddy** means rice that is not yet dehusked.

**Parboiled rice** means non-glutinous rice that has passed through the parboiling process and has its bran removed.

**Part of rice kernels** means each part of the whole kernel that is divided lengthwise in to 10 equal parts.

**Whole kernels** mean rice kernels that are in whole condition without any broken part, including the kernels that have length as from 9 parts onward.

**Head rice** means broken kernels whose lengths are more than 5 parts but have not reached the length of the whole kernel. This includes slit kernels that retain the area as from 80% of the whole kernel.

**Brokens** means broken kernels that have the length not reaching the length of Head rice (>5 parts) and not passing through round hole metal sieve No 7 (sieve that is 0.79mm thick and with hole diameter of 1.75mm)

**Small brokens** mean small broken kernels that pass through round hole metal sieve No 7 (sieve that is 0.79mm thick and with hole diameter of 1.75mm).

**Red kernels** mean rice kernels that have red bran covering the kernels wholly or partly.

**Yellow kernels** mean rice kernels that have some parts of the kernels turn yellow obviously.

**Black kernels** means parboiled rice kernels that are black for whole kernels, including kernels that are dark brown for the whole kernels.

**Partly black kernels** mean parboiled rice kernels that have black or brown dark area on the kernels as from 2.5 parts onward but not reaching the whole kernels.

**Peck kernels** mean parboiled rice kernels that have obviously black or dark brown area on the kernels not reaching 2.5 parts.

**Damaged kernels** mean kernels that are previously damaged as can be seen by the naked eyes due to moisture, heat fungi, insects or other.

**White glutinous rice** means rice that is obtained by removing bran from Cargo glutinous rice

**Under milled kernels** mean milled rice kernels that have the milling degree below that specified for each grade of rice.

**Undeveloped kernels** mean kernels that do not develop normally as should be, and are flat without starch.

**Immature kernels** mean rice kernels that are light green, obtained from immature paddy.

**Other seeds** mean seeds of other plants than rice kernels.

**Foreign matter** means other matter than rice. This includes rice husk and bran detached from rice kernels.

**Milling degree** means the degree to which the rice is milled.

**Ordinarily milled** is the removal of some portions of bran only.

### 3. REFERENCE

Codex standard for rice CODEX STAN 198-1995

Thai Rice Standards, BE 2540.

### 4. SPECIFICATION

#### 4.1 General requirements

Rice shall be fresh, free from abnormal flavours, odours, live insects. The main requirements for rice are:

Moisture	<b>14.0%</b> m/m max.
Short grain ( $\leq 6.2$ mm)	<b>30.0%</b> m/m min.
Whole kernels	<b>65.0%</b> m/m min.
Total Broken ( <i>including Broken not passing through sieve No. 7 and Small broken</i> )	<b>23.0%</b> m/m max or as per contract
Small broken	<b>1.5%</b> m/m max. or as per contract
Red and/or Under milled kernels	<b>6.0%</b> m/m max.
Yellow kernels	<b>2.5%</b> m/m max.
Black kernels	<b>0.6%</b> m/m max.
Total partly black and Peck kernels	<b>4.25%</b> m/m max.
Partly black kernels	<b>2.75%</b> m/m max.
Damaged kernels	<b>1.5%</b> m/m max.
White glutinous rice	<b>2.5%</b> m/m max.
Undeveloped, Immature kernels, Other seeds and Foreign matter ( <i>singly or combined</i> )	<b>0.85%</b> m/m max.
Paddy	<b>10grains/kg</b> max.
Milling degree	<b>Ordinarily milled</b>
Crop year	<b>As per contractual</b>

If required by recipient country, Rice needs to be obtained from non-genetically modified varieties.

#### 4.2 Contaminants

##### 4.2.1 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.

#### 4.2.2 Pesticide residues

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

### 4.3 Hygiene

4.3.1 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 *Recommended International Code of Practice – General Principles of Food Hygiene* (CAC/RCP 1-1969), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product.

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

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

- shall be free from micro-organisms 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 micro-organisms, including fungi, in amounts which may represent a hazard to health.

## 5. ANALYTICAL REQUIREMENTS

The principal tests in table 1 must be performed in order to check if the quality of the **Rice** meets above requirements. Additional analyses shall be defined in case of further quality assessment.

*Table 1: List of compulsory tests and reference method*

No	Analyses/tests	Limit	Reference method (or equivalent)
1	Moisture	14.0% m/m max.	ISO 711-2009
2	Short grain ( $\leq 6.2$ mm)	30.0% m/m min.	Visual examination
3	Whole kernels	65.0% m/m min.	Visual examination
4	Total Brokens (including Brokens not passing through sieve No. 7 and Small brokens)	23.0% m/m max. or as per contract	Visual examination
5	Small brokens	1.5 % m/m max. or as per contract	Visual examination
6	Red and/or Under milled kernels	6.0% m/m max.	Visual examination
7	Yellow kernels	2.5% m/m max.	Visual examination
8	Black kernels	0.6% m/m max.	Visual examination
9	Total partly black and Peck kernels	4.25% m/m max.	Visual examination
10	Partly black kernels	2.75% m/m max.	Visual

			<i>examination</i>
11	Damaged kernels	<b>1.5%</b> m/m max.	<i>Visual examination</i>
12	White glutinous rice	<b>2.5%</b> m/m max.	<i>Visual examination</i>
13	Undeveloped, Immature kernels, Other seeds and Foreign matter ( <i>singly or combined</i> )	<b>0.85%</b> m/m max.	<i>Visual examination</i>
14	Paddy	<b>10grains/kg</b> max.	<i>Visual examination</i>
15	Milling degree	<b>Ordinarily milled</b>	<i>Visual examination</i>
16	GMO ( <i>only if required in the contract</i> )	<b>Negative</b> (< 0.9% of GMO material)	
17	Arsenic (inorganic)	Max.0.2 ppm	AOAC 986.15
18	Ochratoxin A	Max. 5.0 ppb	AOAC 2000.3
19	Aflatoxins Total <sup>1</sup>	Max. 20 ppb	ISO 16050

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<sup>1</sup> WFP or any appointed agent/inspection company will take samples of the Commodity from the Seller and will carry out, through a laboratory of its choice, an analysis of the level of Total Aflatoxins contained in the Commodity. The maximum acceptable limit is 20 ppb. Any analysis result above this limit will be binding on the Seller and, as the case may be, will entitle WFP to reject the Commodity before or at the time of delivery, which must then be entirely replaced by the Seller at its own risks and costs. All additional expenses and/or consequences resulting from non-compliance of the Commodity with the aforementioned maximum authorized Total Aflatoxins level will be borne by the Seller.