



SLOVENSKI STANDARD
oSIST prEN ISO 7301:2022
01-september-2022

Riž - Specifikacija (ISO 7301:2021)

Rice - Specification (ISO 7301:2021)

Reis - Anforderungen (ISO 7301:2021)

Riz - Spécifications (ISO 7301:2021)

Ta slovenski standard je istoveten z: prEN ISO 7301

ICS:

67.060 Žita, stročnice in proizvodi iz njih Cereals, pulses and derived products
<https://standards.iteh.ai> <https://standards.iteh.ai/standards/5/sist-en-iso-7301-2023>

oSIST prEN ISO 7301:2022

en,fr,de

INTERNATIONAL STANDARD

ISO 7301

Fourth edition
2021-06

Rice — Specification

Riz — Spécifications

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN ISO 7301:2023](https://standards.iteh.ai/catalog/standards/sist/da0cee43-fb0c-4d1e-95d9-52c6df3c2e56/sist-en-iso-7301-2023)

<https://standards.iteh.ai/catalog/standards/sist/da0cee43-fb0c-4d1e-95d9-52c6df3c2e56/sist-en-iso-7301-2023>



Reference number
ISO 7301:2021(E)

© ISO 2021

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

SIST EN ISO 7301:2023

<https://standards.iteh.ai/catalog/standards/sist/da0cee43-fb0c-4d1e-95d9-52c6df3c2e56/sist-en-iso-7301-2023>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Specifications	5
4.1 General, sensory and health specifications.....	5
4.2 Physical and chemical specifications.....	5
4.3 Minimum specifications subject to agreement.....	6
5 Test methods	6
6 Packaging	7
Annex A (normative) Methods of analysis for rice specifications	8
Annex B (normative) Determination of waxy rice in parboiled rice	18
Annex C (normative) Determination of stress-cracked kernel in non-parboiled rice	20
Bibliography	21

iTeh Standards (<https://standards.iteh.ai>) Document Preview

[SIST EN ISO 7301:2023](https://standards.iteh.ai/catalog/standards/sist/da0cee43-fb0c-4d1e-95d9-52c6df3e2e56/sist-en-iso-7301-2023)

<https://standards.iteh.ai/catalog/standards/sist/da0cee43-fb0c-4d1e-95d9-52c6df3e2e56/sist-en-iso-7301-2023>

ISO 7301:2021(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 4, *Cereals and pulses*.

This fourth edition cancels and replaces the third edition (ISO 7301:2011), which has been technically revised. The main changes compared with the previous edition are as follows:

- the terms and definitions have been updated;
- the method for the determination of the average length originally given in [A.4.3.2](#) and [A.4.3.3](#) has been deleted, and a reference to ISO 11746 has been added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Rice — Specification

1 Scope

This document establishes the minimum specifications for rice (*Oryza sativa* L.) that is subject to international trade. It is applicable to husked rice and milled rice (aromatic and not aromatic), parboiled or not, intended for direct human consumption. It does not apply to other products derived from rice nor to waxy rice (glutinous rice).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 712, *Cereals and cereal products — Determination of moisture content — Reference method*

ISO 11746, *Rice — Determination of biometric characteristics of kernels*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

paddy

paddy rice <https://standards.iteh.ai/catalog/standards/sist/da0cee43-fb0c-4d1e-95d9-52c6df3e2e56/sist-en-iso-7301-2023>
rough rice
rice retaining its husk after threshing

3.2

husked rice

brown rice
cargo rice
paddy (3.1) from which only the husk has been removed

Note 1 to entry: The processes of husking and handling can result in some loss of bran.

3.3

milled rice

white rice
husked rice (3.2) from which some or all of the bran and embryo have been removed by mechanical milling

3.4

parboiled rice

rice subjected to a hydrothermal treatment so that the starch is fully gelatinized, followed by a drying process

ISO 7301:2021(E)

3.5

parboiled milled rice

milled rice (3.3) obtained from *paddy* (3.1) or *husked rice* (3.2) subjected to a hydrothermal treatment so that the starch is fully gelatinized, followed by a drying process

3.6

parboiled husked rice

husked rice (3.2) obtained from *paddy* (3.1) subjected to a hydrothermal treatment so that the starch is fully gelatinized, followed by a drying process

3.7

waxy rice

glutinous rice

varieties of rice whose kernels have a white and opaque appearance

Note 1 to entry: The starch of waxy rice contains an extremely low level of amylose, consisting almost entirely of amylopectin. The kernels have a tendency to stick together after cooking.

3.8

aromatic rice

variety of rice releasing a particular aroma (e.g. roasted nuts, popcorn) that increases during cooking

3.9

entire kernel

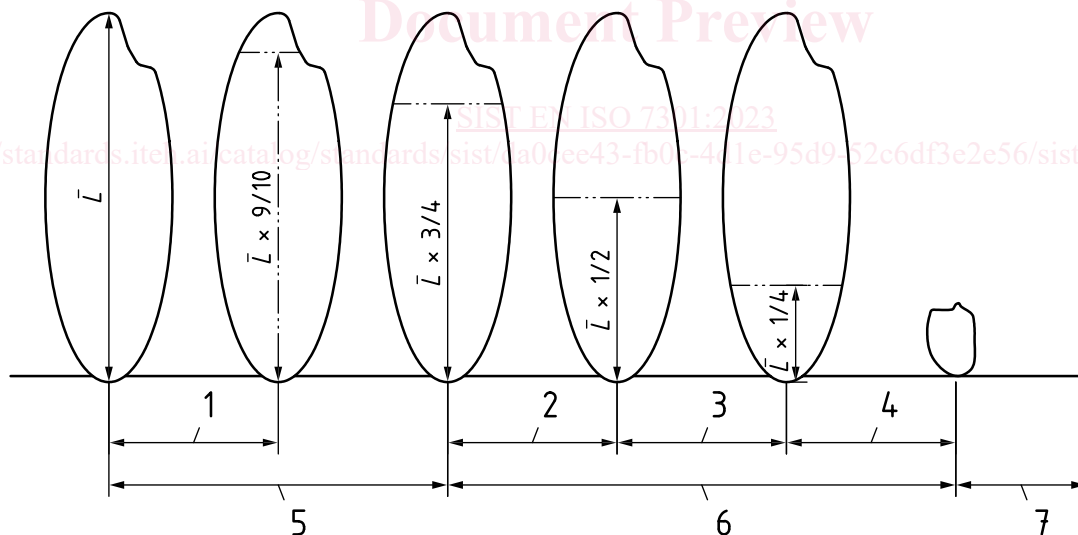
husked or milled kernel without any broken part

3.10

whole kernel

husked or milled kernel with a length greater than or equal to nine-tenths of the *average length* (3.17) of an *entire kernel* (3.9)

Note 1 to entry: See [Figure 1](#).

**Key**

- | | | | |
|---|-----------------------------|-----------|-----------------------|
| 1 | whole kernel (3.10) | 5 | head rice (3.11) |
| 2 | large broken kernel (3.13) | 6 | broken kernel (3.12) |
| 3 | medium broken kernel (3.14) | 7 | chip (3.16) |
| 4 | small broken kernel (3.15) | \bar{L} | average length (3.17) |

Figure 1 — Size of kernel, broken kernel and chip

3.11**head rice**

whole kernel (3.10) or part of a kernel with a length greater than or equal to three-quarters of the *average length* (3.17) of an *entire kernel* (3.9)

Note 1 to entry: See [Figure 1](#).

3.12**broken kernel**

part of a kernel with a length less than three-quarters of the *average length* (3.17) of an *entire kernel* (3.9) but which does not pass through a test sieve with round apertures having a diameter of 1,4 mm

3.13**large broken kernel**

part of a kernel with a length less than three-quarters of but greater than one-half of the *average length* (3.17) of an *entire kernel* (3.9)

Note 1 to entry: See [Figure 1](#).

3.14**medium broken kernel**

part of a kernel with a length less than or equal to one-half of but greater than one-quarter of the *average length* (3.17) of an *entire kernel* (3.9)

Note 1 to entry: See [Figure 1](#).

3.15**small broken kernel**

part of a kernel with a length less than or equal to one-quarter of the *average length* (3.17) of an *entire kernel* (3.9) but which does not pass through a test sieve with round apertures having a diameter of 1,4 mm

Note 1 to entry: See [Figure 1](#).

3.16**chip**

part of a kernel that passes through a test sieve with round apertures having a diameter of 1,4 mm

Note 1 to entry: The test sieve should conform to ISO 5223^[4].

3.17**average length**
$$\bar{L}$$

arithmetic mean of the length of the *entire kernels* (3.9) that are not *immature or malformed* (3.25) in the test sample

Note 1 to entry: Calculation of the average length is given in ISO 11746.

3.18**extraneous matter**

inorganic and organic non-toxic matter other than kernels or parts of *husked rice* (3.2) or *milled rice* (3.3)

3.19**inorganic extraneous matter**

matter, such as stone, sand and dust

3.20**organic extraneous matter**

matter including edible and non-edible

ISO 7301:2021(E)**3.21****edible organic extraneous matter**

matter, such as bran, foreign seeds, flour lumps

3.22**non-edible organic extraneous matter**

matter, such as husk, straw

3.23**heat-damaged kernel**

head rice (3.11) or *broken kernel* (3.12) that has changed its normal colour

Note 1 to entry: This category includes kernels that are a yellow to dark yellow colour in the case of non-parboiled rice and an orange to dark orange colour in the case of *parboiled rice* (3.4), likely due to a microbiological alteration.

3.24**damaged kernel**

head rice (3.11) or *broken kernel* (3.12) showing evident deterioration due to moisture, pests, disease or other causes, but excluding *heat-damaged kernels* (3.23)

3.25**immature or malformed kernel**

head rice (3.11) or *broken kernel* (3.12) that is unripe or badly developed

3.26**chalky kernel**

head rice (3.11) or *broken kernel* (3.12) of non-parboiled rice, except *waxy rice* (3.7), whose whole surface has an opaque and floury appearance

3.27**red kernel**

head rice (3.11) or *broken kernel* (3.12) having a red bran covering more than one-quarter of its surface

3.28**red-streaked kernel**

head rice (3.11) or *broken kernel* (3.12) with red bran streaks of a length greater than or equal to one-half of its length but where the surface covered by these red streaks is less than one-quarter of the total surface

3.29**partly gelatinized kernel**

head rice (3.11) or *broken kernel* (3.12) of *parboiled rice* (3.4) that is not fully gelatinized and shows a distinct white opaque area

3.30**peck**

head rice (3.11) or *broken kernel* (3.12) of *parboiled rice* (3.4) of which more than one-quarter of the surface is dark brown or black in colour due to the parboiling process

3.31**stress-cracked kernel**

whole kernel (3.10) non-parboiled with an uninterrupted stress-crack line covering at least three quarters of the kernel width