INTERNATIONAL STANDARD

ISO 6646

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Rice — Determination of the potential milling yield from paddy and from husked rice

Riz — Détermination des rendements d'usinage à partir du riz paddy et du riz décortiqué

Reference number
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Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 6646 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 4, *Cereals and pulses*.

This third edition cancels and replaces the second edition (ISO 6646:2000), which has been technically revised.

Introduction

The milling yields obtained from abrasive testing mills of the same model, although with differing adjustments, may vary more widely than those obtained from different types of abrasive testing mill.

This International Standard specifies a method for the determination of milling yield, to ensure that results obtained by different operators using abrasive test mills are comparable.

Rice — Determination of the potential milling yield from paddy and from husked rice

1 Scope

This International Standard specifies a laboratory method for the determination of the yield of husked rice obtained from paddy or parboiled paddy (*Oryza sativa* L.), and for the determination of the yield of milled head rice obtained from paddy or parboiled paddy, or from husked rice or husked parboiled rice.

This International Standard is only applicable to abrasive milling equipment.

2 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.

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

ISO 7301, *Rice — Specification*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 7301 and the following apply.

3.1
husked rice yield
amount of husked rice obtained from paddy

3.2
milled rice yield
amount of milled rice (head rice, broken kernels, and chips) obtained from paddy or husked rice

3.3
milled head rice yield
amount of milled whole kernel and head rice obtained from paddy or husked rice

3.4
perfect kernel
husked or milled kernel without any broken part which is not immature or malformed

4 Principle

The husk is mechanically removed from paddy. The resultant husked rice is then weighed. Next, the bran and germ are mechanically removed from the husked rice to a fixed reduction in mass and the resulting milled head rice is weighed.

5 Apparatus

Usual laboratory apparatus and, in particular, the following.

5.1 Sample divider, conical sampler or multiple-slot sampler with distribution system.

5.2 Testing husker, suitable for removal of the husk from paddy without damaging the kernels.

5.3 Abrasive testing mill, suitable for removal of the pericarp and germ from husked rice.

5.4 Tweezers.

5.5 Small bowls.

5.6 Balance, capable of being read to the nearest 0,01 g.

6 Sampling

Sampling is not part of the method specified in this International Standard. A recommended sampling method is given in ISO 24333[1].

It is important the laboratory receive a truly representative sample which has not been damaged or changed during transport or storage.

7 Preparation of test sample

The laboratory sample shall have a mass of not less than 1,5 kg.

Carefully mix the laboratory sample to make it as homogeneous as possible, then reduce it through a sample divider (5.1) to obtain the test sample.

Determine the moisture content of the test sample in accordance with ISO 712. The acceptable range is a mass fraction of (13,0 ± 1,0) %.

If the moisture content is outside the acceptable range, the laboratory sample should be kept at ambient temperature and humidity for a sufficient period to obtain balanced moisture content within the specified range.

8 Procedure

8.1 Adjustment of equipment

8.1.1 Testing husker adjustment

Adjustment of the test equipment shall be carried out prior to the determination.

The testing husker (5.2) shall be considered correctly adjusted when, subsequent to dehusking of rice samples with grain dimensions similar to those of the laboratory sample, the following are not present:

a) husked rice with damage to the pericarp;

b) grains of paddy or husked rice in the separated husk;

c) husk particles in the husked rice.