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**Maize (*Zea mays* L.) —  
Specification**

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**Mauritius Standards Bureau**

**Moka**

## National Foreword

This Mauritian Standard is identical with the ISO Standard **ISO 19942:2018**, *Maize (Zea mays L.) — Specification* published by the International Organization for Standardization (ISO). It was adopted by the Mauritius Standards Bureau on the recommendation of the **Food Products Standards Committee** and approval of the **Standards Council on 25 July 2019** and notified in the **Government Gazette on 31 September 2019\***.

For the purpose of this Standard the following changes should be made:

- (i) the 'decimal comma' should be replaced by 'decimal point'.

### General Notice No 1504 of 2019



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## 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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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

# Maize (*Zea mays* L.) — Specification

## 1 Scope

This document specifies minimum specifications for maize (*Zea mays* L.) intended for human consumption and which is the subject of international trade.

## 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 5223, *Test sieves for cereals*

ISO 6540, *Maize — Determination of moisture content (on milled grains and on whole grains)*

ISO 6639-3, *Cereals and pulses — Determination of hidden insect infestation — Part 3: Reference method*

ISO 6639-4, *Cereals and pulses — Determination of hidden insect infestation — Part 4: Rapid methods*

ISO 7971-1, *Cereals — Determination of bulk density, called mass per hectolitre — Part 1: Reference method*

ISO 7971-3, *Cereals — Determination of bulk density, called mass per hectolitre — Part 3: Routine method*

ISO 24333, *Cereals and cereal products — Sampling*

## 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:

— IEC Electropedia: available at <http://www.electropedia.org/>

— ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **bulk density**

#### **test weight**

cereals ratio of the mass of a cereal to the volume it occupies after being poured into a container under well-defined conditions

Note 1 to entry: Bulk density is expressed in kilograms per hectolitre of grains as received. Other units such as grams per litre or pound per bushel could also be used.

### 3.2

#### **impurity**

all matters of a sample of grain other than the basic cereal of unimpaired quality

Note 1 to entry: In maize, impurities comprise four main categories: *broken grains* (3.3), *damaged grains* (3.4), *other grains* (3.5) and *miscellaneous impurities* (3.6).

Note 2 to entry: Live pests are not considered as impurities. They are specified as separate criterion.

[SOURCE: EN 16378:2013, 3.1]

### 3.3

#### **broken grain**

grain or pieces of grain that can pass through a sieve with a circular mesh of 4,5 mm in diameter as specified in ISO 5223

### 3.4

#### **damaged grain**

whole kernel that is distinctly discoloured, sprouted, diseased or damaged by weather, pest, heat, or any other causes and that is not an *unsound grain* (3.6.2) but that is still fit for human and/or animal consumption

#### 3.4.1

##### **heat-damaged grain**

grain with a chestnut to black coloration, resulting from the effect of heat, and of which a section of the endosperm is yellowish-grey or brownish black resulting from the effect of spontaneous heat generation or too extreme heating during drying

#### 3.4.2

##### **sprouted grain**

grain in which the radicle or plumule is clearly visible to the naked eye

Note 1 to entry: Account should be taken of the general appearance of the sample when its content of sprouted grains is assessed.

Note 2 to entry: Sprouted grains are those where the germ has undergone clearly visible changes which makes it easy to distinguish the sprouted grain from the normal grain.

#### 3.4.3

##### **grain attacked by pests**

grain that shows visible damage owing to attack by insects, rodents, mites or other pests

### 3.5

#### **other grain**

grain other than maize, in any condition

### 3.6

#### **miscellaneous impurity**

element that can consist of *extraneous seeds* (3.6.1), *unsound grains* (3.6.2), *extraneous matter* (3.6.3) and *impurities of animal origin* (3.6.4)

#### 3.6.1

##### **extraneous seed**

seed of a plant, whether or not cultivated, other than cereal

Note 1 to entry: "Noxious seeds" means seeds that are toxic to humans and animals, seeds hampering or complicating the cleaning and milling of cereals and seeds affecting the quality of products processed from cereals.

Note 2 to entry: For information on noxious seeds, see [Annex A](#).

#### 3.6.2

##### **unsound grain**

grain rendered unfit for human and/or animal consumption, owing to putrefaction, mildew, grain affected with fusariosis, or bacterial or other causes

Note 1 to entry: Unsound grains also include grains damaged by spontaneous heat generation or too extreme heating during drying which are fully grown grains in which the tegument is coloured greyish-brown to black while the cross-section of the kernel is coloured yellowish grey to brownish-black.