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## **Durum wheat — Determination of proportion of non-wholly vitreous grains (Reference method)**

*Blé dur — Détermination du taux de mitadinage (Méthode de référence)*

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Reference number  
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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 5532 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*.

This second edition cancels and replaces the first edition (ISO 5532: 1980), sub-clause 8.2 of which has been the subject of a minor revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Durum wheat — Determination of proportion of non-wholly vitreous grains (Reference method)

## 1 Scope and field of application

This International Standard specifies a reference method for the determination of the proportion of non-wholly vitreous grains, applicable exclusively to durum wheat (*Triticum durum* Desfontaines).

## 2 References

ISO 950, *Cereals — Sampling (as grain)*.

ISO 5223, *Test sieves for cereals*.

## 3 Definitions

For the purposes of this International Standard, the following definitions apply.

**3.1 vitreous wheat:** Translucent wheat, the cut grain of which has a smooth, shiny surface without any mealy appearance.

**3.2 non-wholly vitreous grains:** Durum wheat grains which are not considered to be completely vitreous under the conditions of this International Standard.

**3.3 proportion of non-wholly vitreous grains:** The percentage by mass of non-wholly vitreous grains in a sample of durum wheat.

## 4 Principle

Removal of any impurities, including grains of common wheat (*Triticum aestivum*), by sifting and sorting by hand, followed by separation of visibly non-wholly vitreous grains, and verification of the vitreous state of the other grains after cutting with a scalpel.

## 5 Apparatus

### 5.1 Sample divider.

**5.2 Sieve,** with perforated plate having slots 1,80 mm × 20,0 mm, complying with the requirements of ISO 5223.

### 5.3 Scalpel.

**5.4 Balance,** having an accuracy of 0,1 g.

## 6 Sampling

See ISO 950.

## 7 Procedure

### 7.1 Preparation of the test sample

**7.1.1** Take approximately 100 g of the laboratory sample using the sample divider (5.1), and weigh it to the nearest 0,1 g (mass *m*).

**7.1.2** Place the test sample on the sieve (5.2) and shake by hand or machine for 30 s, keeping the sieve horizontal and moving it in the direction parallel with the length of the slots. Discard the material passing through the sieve.

**7.1.3** Remove by hand any impurities in the sample retained on the sieve. Grains of common wheat shall be considered to be impurities.

### 7.2 Test portion

Weigh the mass of durum wheat grains thus prepared to the nearest 0,1 g.

### 7.3 Determination

Spread the test portion (7.2) over a flat surface. Examine each grain individually with the naked eye (corrected, if necessary, for abnormal vision).

Separate out all grains which are visibly non-wholly vitreous. (Do not confuse non-wholly vitreous grains with "washed grains", the external appearance of which is similar to that of completely mealy grains, but which differ in their dull appearance. Washed grains are not necessarily mealy.) Using the scalpel (5.3), cut transversely all the remaining grains through the middle and remove both parts of each grain which, when cut, prove to be non-wholly vitreous.