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BS EN 16378:2013



BSI Standards Publication

Cereals — Determination of impurities content in maize (*Zea mays*, L.) and sorghum (*Sorghum bicolor*, L.)

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The UK participation in its preparation was entrusted to Technical Committee AW/4, Cereals and pulses.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Cereals - Determination of impurities content in maize (*Zea mays*, L.) and sorghum (*Sorghum bicolor*, L.)

Céréales - Détermination de la teneur en impuretés dans le maïs (*Zea mays*, L.) et le sorgho (*Sorghum bicolor*, L.)

Getreide - Bestimmung von Besatz in Mais (*Zea mays*, L.) und Hirse (*Sorghum bicolor*, L.)

This European Standard was approved by CEN on 19 July 2013.

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Foreword

This document (EN 16378:2013) has been prepared by Technical Committee CEN/TC 338 "Cereal and cereal products", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2014, and conflicting national standards shall be withdrawn at the latest by February 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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1 Scope

This European Standard specifies the term *Besatz* (impurities) and the method for the determination of its components. The term *Besatz* is used as a parameter for certain quality aspects in maize (*Zea mays* L.) and sorghum (*Sorghum bicolor* L.).

This method has been validated in an interlaboratory study via the analysis of samples containing natural amount of impurities, ranging from:

- 0,0 % to 2,7 % for broken grains;
- 0,2 % to 3,5 % for grains impurities;
- 0,5 % to 3,3 % for miscellaneous impurities;
- 1,8 % to 8,7 % for total impurities.

For further information on the validation, see Annex D.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*

3 Terms and definitions

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

3.1

Besatz

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

Note 1 to entry: It comprises the four fractions: broken grains (3.2), grain impurities (3.3), sprouted grains (3.4) and miscellaneous impurities (3.5).

Note 2 to entry: The sum of the four fractions is also called Total *Besatz*.

Note 3 to entry: Live pests are not considered as *Besatz*. They are specified as a separate criterion.

Note 4 to entry: A schematic summary on *Besatz* is given in Annex A.

3.2

broken grains

grains or pieces of grains which pass through a sieve with a circular mesh of:

- 4,5 mm in diameter for maize;
- 1,8 mm in diameter for sorghum

3.3

grain impurities

elements consisting of other cereals, grains damaged by pests, grains overheated during drying