

TERAVILI JA TERAVILJATOOTED. LISANDITE
MÄÄRAMINE NISUS (*TRITICUM AESTIVUM* L.), KÕVAS
NISUS (*TRITICUM DURUM* DESF.), RUKKIS (*SECALE*
CEREALE L.), TRITIKALES (*TRITICOSECALE* WITTMACK
SPP) JA SÖÖDAODRAS (*HORDEUM VULGARE* L.)

Cereal and cereal products - Determination of Besatz in
wheat (*Triticum aestivum* L.), durum wheat (*Triticum*
durum Desf.), rye (*Secale cereale* L.), triticale
(*Triticosecale Wittmack* spp) and feed barley (*Hordeum*
vulgare L.)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 15587:2019 sisaldab Euroopa standardi EN 15587:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 15587:2019 consists of the English text of the European standard EN 15587:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.12.2018.	Date of Availability of the European standard is 19.12.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 67.060

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Cereal and cereal products - Determination of Besatz in wheat (*Triticum aestivum L.*), durum wheat (*Triticum durum Desf.*), rye (*Secale cereale L.*), triticale (*Triticosecale Wittmack spp*) and feed barley (*Hordeum vulgare L.*)

Céréales et produits céréaliers - Détermination du taux d'impuretés dans le blé (*Triticum aestivum L.*), le blé dur (*Triticum durum Desf.*), le seigle (*Secale cereale L.*), le triticale (*Triticosecale Wittmack spp*) et l'orge fourragère (*Hordeum vulgare L.*)

Getreide und Getreideerzeugnisse - Bestimmung von Besatz in Weizen (*Triticum aestivum L.*), Hartweizen (*Triticum durum Desf.*), Roggen (*Secale cereale L.*), Triticale (*Triticosecale Wittmack spp.*) und Futtergerste (*Hordeum vulgare L.*)

This European Standard was approved by CEN on 1 October 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents**Page**

European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions.....	4
4 Principle.....	8
5 Apparatus.....	8
6 Sampling.....	8
7 Procedure (see diagram in Annex D).....	8
8 Expression of results.....	9
9 Precision.....	10
9.1 General.....	10
9.2 Repeatability.....	10
9.3 Reproducibility.....	11
9.4 Uncertainty.....	11
10 Test report.....	12
Annex A (informative) Indicative list of harmful and toxic seeds.....	13
A.1 Toxic seeds.....	13
A.2 Harmful seeds.....	13
Annex B (informative) Classification of damages.....	14
Annex C (informative) Summary classification of impurities.....	15
Annex D (normative) Diagram of procedure.....	16
Annex E (informative) Example of calculation.....	17
Annex F (informative) Results of interlaboratory test.....	18
Bibliography.....	28

European foreword

This document (EN 15587:2018) 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 June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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

This document supersedes EN 15587:2008+A1:2013.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the term *Besatz* (impurities) and describes methods for the determination of its components. The term *Besatz* is used as a parameter for certain quality aspects in common wheat (*Triticum aestivum* L.), durum wheat (*Triticum durum* Desf.), rye (*Secale cereale* L.), triticale (*Triticosecale Wittmack* spp) and feed barley (*Hordeum vulgare* L.).

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.

EN 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 matter of a sample of grain other than the basic cereal of unimpaired quality

Note 1 to entry: It comprises the four fractions: broken grains, grain impurities, sprouted grains and miscellaneous impurities.

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

Note 3 to entry: A schematic summary on *Besatz* is given in Annex C.

Note 4 to entry: Pictures of examples are given in [9].

3.2

broken grains

all grains belonging to the basic cereal and whose endosperm is partially uncovered, including grains damaged by threshing and grains from which the germ has been removed

Note 1 to entry: Grains damaged by pests or unsound are considered respectively as 3.3.3 and 3.5.2.

3.3

grain impurities

fraction consisting of shrivelled grains, other cereals, grains damaged by pests, grains in which the germ is discoloured (only for common and durum wheat), mottled grains (only for durum wheat) and grains overheated during drying

Note 1 to entry: For common wheat, grains in which the germ is discoloured are disregarded up to 8 %.