

This document is a preview generated by EVS

Cereals and cereal products - Determination of moisture content - Reference method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 712:2010 sisaldab Euroopa standardi EN ISO 712:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 28.02.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.11.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 712:2010 consists of the English text of the European standard EN ISO 712:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 28.02.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 15.11.2009.

The standard is available from Estonian standardisation organisation.

ICS 67.060

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian 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 permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

EUROPEAN STANDARD

EN ISO 712

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2009

ICS 67.060

English Version

Cereals and cereal products - Determination of moisture content
- Reference method (ISO 712:2009)

Céréales et produits céréaliers - Détermination de la teneur
en eau - Méthode de référence (ISO 712:2009)

Getreide und Getreideerzeugnisse - Bestimmung des
Feuchtegehaltes - Referenzverfahren (ISO 712:2009)

This European Standard was approved by CEN on 14 November 2009.

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 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 Management Centre has the same status as the official versions.

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



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 712:2009) has been prepared by Technical Committee ISO/TC 34 "Food products" in collaboration with 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 May 2010, and conflicting national standards shall be withdrawn at the latest by May 2010.

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.

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

Endorsement notice

The text of ISO 712:2009 has been approved by CEN as a EN ISO 712:2009 without any modification.

Contents

Page

Foreword	iv
1 Scope	1
2 Terms and definitions	1
3 Principle	1
4 Apparatus	1
5 Sampling	2
6 Preparation of the test sample	2
6.1 Products not requiring grinding	2
6.2 Products requiring grinding	3
6.2.1 General	3
6.2.2 Grinding without preconditioning	3
6.2.3 Grinding with preconditioning	3
7 Procedure	3
7.1 Number of determinations	3
7.2 Test portion	3
7.3 Drying	4
7.4 Weighing	4
8 Expression of results	4
8.1 Without preconditioning	4
8.2 With preconditioning	4
9 Precision	5
9.1 Interlaboratory test	5
9.2 Repeatability	5
9.3 Reproducibility	5
9.4 Comparison of two groups of measurements in one laboratory	5
9.5 Comparison of two groups of measurements in two laboratories	6
9.6 Uncertainty	6
10 Test report	6
Annex A (informative) Results of interlaboratory test	7
Annex B (informative) Cereals and cereal products — Determination of moisture content	
Absolute method	9
Bibliography	16

Cereals and cereal products — Determination of moisture content — Reference method

1 Scope

This International Standard specifies a routine reference method for the determination of the moisture content of cereals and cereal products.

This International Standard applies to: wheat, rice (paddy, husked and milled), barley, millet (*Panicum miliaceum*), rye, oats, triticale, sorghum in the form of grains, milled grains, semolina or flour.

The method is not applicable to maize and pulses.

NOTE For moisture content determination in maize, see ISO 6540^[5]; and for pulses, see ISO 24557^[7].

2 Terms and definitions

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

2.1

moisture content

mass loss undergone by a product under the conditions specified in this International Standard

NOTE Moisture content is expressed as a percentage.

3 Principle

If necessary, a laboratory sample is ground, after conditioning, if required. A test portion is dried at a temperature between 130 °C and 133 °C, under conditions which enable a result to be obtained which corresponds to that obtained by the absolute method described in Annex B.

4 Apparatus

4.1 Analytical balance, capable of weighing to an accuracy of $\pm 0,001$ g.

4.2 Grinding mill, having the following characteristics:

- a) made of material which does not absorb moisture;
- b) easy to clean and having as little dead space as possible;
- c) enabling grinding to be carried out rapidly and uniformly, without appreciable development of heat (difference of temperatures before and after grinding smaller than or equal to 5 °C);

NOTE A grinding mill fitted with a cooling device can comply with this requirement.

- d) tightness to air to avoid water exchange between sample and external air;
- e) adjustable so as to obtain particles of the dimensions indicated in Table 1.