

**Flowing cereals and milled cereal products –  
Automatic sampling by mechanical means  
(ISO 6644:2002)**

ICS 67.060

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The European Standard EN ISO 6644:2007 has the status of a Swedish Standard. This document contains the official English version of EN ISO 6644:2007.

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English Version

## Flowing cereals and milled cereal products - Automatic sampling by mechanical means (ISO 6644:2002)

Céréales et produits de mouture des céréales en  
mouvement - Échantillonnage automatique par des moyens  
mécaniques (ISO 6644:2002)

Freifließendes Getreide und Getreidemahlerzeugnisse -  
Automatische Probenahme durch mechanische Mittel (ISO  
6644:2002)

This European Standard was approved by CEN on 7 January 2007.

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.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

The text of ISO 6644:2002 has been prepared by Technical Committee ISO/TC 34 "Agricultural food products" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 6644:2007 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of an identical text or by endorsement, at the latest by August 2007, and conflicting national standards shall be withdrawn at the latest by August 2007.

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 United Kingdom.

### Endorsement notice

The text of ISO 6644:2002 has been approved by CEN as EN ISO 6644:2007 without any modifications.

## **Introduction**

Correct sampling is an operation that requires most careful attention. Therefore emphasis cannot be too strongly laid on the necessity of obtaining a properly representative sample of cereal grain or milled product. Careless or inaccurate sampling could lead to misunderstanding and to unwarranted financial adjustment.

The procedures given in this International Standard are recognized as good practice and it is strongly recommended that they be followed whenever practicable. It is difficult to lay down fixed rules to be followed in every case, and particular circumstances may render some modification of the method desirable. For example, determination of qualitative factors, such as moisture content, is best achieved by examination of the laboratory sample, whereas a quantitative factor, such as detection of insects, is best achieved by examination of individual increments.



# Flowing cereals and milled cereal products — Automatic sampling by mechanical means

## 1 Scope

This International Standard specifies requirements for the automatic sampling, by mechanical means, of cereals (as grain) or of milled cereal products moving in bulk, for assessment of their quality.

It is not applicable to commodities in sacks or in packages, to static bulks in wagons, ships, bulk tankers, silos or warehouses<sup>1)</sup>. It does not apply to seed grain.

## 2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, this publication do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 13690, *Cereals, pulses and milled products — Sampling of static batches*

## 3 Terms and definitions

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

### 3.1

#### **consignment**

quantity of product dispatched or received at one time and covered by a particular contract or shipping document

NOTE It may be composed of one or more lots.

### 3.2

#### **lot**

stated portion of a consignment

NOTE Unless otherwise specified in the contract, consignments should be considered in lots of up to 500 tonnes.

### 3.3

#### **increment**

small quantity taken from the product stream during a stated short period of time

### 3.4

#### **bulk sample**

quantity of product obtained by combining and mixing thoroughly the increments taken from a specific lot, or obtained from a continuously taken sample allowed to accumulate

NOTE For recommendations on achieving a homogenous mix of large quantities of sampled product, see ISO 13690.

1) For sampling of cereals as grain, see ISO 13690.

### 3.5

#### **laboratory sample**

quantity of product divided according to instructions given in ISO 13690 and removed from the bulk sample, and intended for analysis or other examination

### 3.6

#### **flowing product**

product to be sampled moving through a conveying system, or in free-fall from a spout or chute

## **4 General requirements**

**4.1** Arrangements for fixed or temporary automatic sampling shall be made jointly by the interested parties.

**4.2** The purpose of sampling is to obtain a sample corresponding in characteristics and composition with the lot from which it was taken. Therefore, the mechanical sampling device, having been installed, suitably adjusted and set in operation, shall automatically take an increment or a series of increments from a lot. Such increment or increments may be taken continuously, or intermittently and repeatedly, depending on the device used.

**4.3** It is normal practice that a product which is sea-damaged or suspected of being contaminated, damaged or out of condition is kept separate from the sound product and is sampled separately. Samples of the unsound material shall not be mixed with samples of the sound material.

**4.4** Special care is necessary to ensure that all parts of the sampler are clean, dry and free from foreign odours.

**4.5** Sampling shall be carried out in such a manner as to protect the samples, the sampler, and the containers in which the samples are placed, from contamination such as rain or dust. In the case of products for human consumption, the installation shall comply with relevant food safety legislation.

## **5 Requirements for apparatus**

### **5.1 General**

Mechanical sampling equipment shall be capable of taking increments from the entire cross section, or as much of the cross section as possible, of the flowing bulk material. Annex A gives descriptions of the general types of automatic sampling devices and illustrations of examples of such types.

### **5.2 Adjustment**

The equipment shall be capable of adjustment such that the size of increments and frequency at which they are taken can be varied over the desired wide ranges.

### **5.3 Access**

Each sampler shall be provided with suitable access for convenient inspection, cleaning, maintenance and repair of all wearing surfaces, and for sampling verification. Access equipment should be constructed of materials that will not generate an electrostatic charge.

### **5.4 Safety**

The installation shall comply with all applicable safety requirements, including adequate illumination for inspection, operation and maintenance. When used in a potentially dusty environment, the operator should wear a suitable respirator.