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SIST EN ISO 13690:2007

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ICS 67.060

English Version

Cereals, pulses and milled products - Sampling of static batches
(ISO 13690:1999)

Céréales, légumineuses et produits de mouture -
Échantillonnage des lots statiques (ISO 13690:1999)

Getreide, Hülsenfrüchte und Mahlerzeugnisse -
Probenahme statischer Partien (ISO 13690:1999)

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.

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.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of ISO 13690:1999 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 13690:2007 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of an identical text or by endorsement, at the latest by August 2007, and conflicting national standards shall be withdrawn at the latest by August 2007.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.

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The text of ISO 13690:1999 has been approved by CEN as EN ISO 13690:2007 without any modifications.

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

*Céréales, légumineuses et produits de mouture — Échantillonnage des lots
statiques*

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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 13690 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 4, *Cereals and pulses*.

This first edition of ISO 13690 cancels and replaces ISO 950:1979, ISO 951:1979 and ISO 2170:1980.

Annex A forms a normative part of this International Standard. Annexes B and C are for information only.

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Introduction

Correct sampling is an operation that requires the most careful attention. Emphasis cannot, therefore, be too strongly laid on the necessity of obtaining a properly representative sample of cereals, pulses and milled products. Accurate analytical work and the interpretation of results are wasted if the sample does not accurately represent the lot from which is taken.

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 recognised that 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 if it is desired to check the uniformity of a consignment by the examination of individual increments.

In certain areas there are widely recognized trade associations which specify rules for the sampling procedures to be used in contracts under their auspices. In no case will this International Standard override the rules laid down in such contracts.

It is highly desirable that personnel employed in sampling should have been suitably trained.

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Cereals, pulses and milled products — Sampling of static batches

1 Scope

This International Standard specifies general conditions relating to sampling for the assessment of the quality of cereals, pulses and milled products from cereals and pulses (hereinafter called "grain"), in bulk or in bags, but excluding pellets.

It is applicable to the manual or mechanical sampling of static bulk grain up to a depth of 3 m. For static bulks exceeding 3 m in depth up to a maximum depth of 12 m, it is necessary to use mechanical sampling methods. For bulk grain exceeding 12 m in depth it is necessary to sample grain when flowing. This latter sampling method is also applicable for all depths of bulk grain (see ISO 6644).

This International Standard is not applicable to seed grain, nor does it apply to sampling for testing for hidden infestation. It is not applicable to flowing grain.

This International Standard is not applicable for certain sampling requirements (e.g. microbiological, mycotoxin and pesticide residue analysis). In these cases, it is recommended that the parties concerned come to an agreement.

NOTE 1 Sampling of seed grain is covered by rules established by the International Seed Testing Association.

NOTE 2 Sampling for hidden insect infestation is covered by ISO 6639-2.

NOTE 3 ISO 6644 covers sampling of flowing grain.
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2 Terms and definitions

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

2.1 consignment

physical quantity of grain on offer, dispatched or received at one time, and covered by a particular contract or shipping document; it may be composed of one or more lots

NOTE Consignments should be considered in lots not exceeding 500 t.

2.2 lot

stated portion of the consignment whose quality is to be assessed

2.3 increment

small equal quantity of grain taken from each individual sampling point in the lot, throughout the full depth of the lot

2.4 laden

term to describe a partly or completely full state, as for wagon, lorry, barge or ship

NOTE See 6.3.1.

2.5 bulk sample

quantity of grain obtained by combining and mixing the increments taken from a specific lot

2.6

laboratory sample

quantity of grain removed from the bulk sample and intended for analysis or other examination

3 General principles

3.1 Samples should be taken jointly by representatives of the buyer and seller or by a sampling superintendent appointed jointly.

3.2 Samples shall be as representative as possible of the lots from which they are taken. Therefore, as the composition of a lot is seldom uniform, a sufficient number of increments shall be taken and carefully mixed, thus giving a bulk sample from which the laboratory samples (see 8.3) are obtained by successive divisions or otherwise.

NOTE A sampling scheme for consignments of more than 100 bags is given in annex A.

3.3 It is normal practice that grain which is sea-damaged or otherwise damaged in transit, or is out of condition, is kept separate from the sound grain and is sampled separately. Samples of unsound material shall not be mixed with samples of sound material and shall be identified and quantified (see clause 11).

3.4 Special care is necessary to ensure that all sampling apparatus is clean, dry and free from foreign odours.

3.5 Sampling shall be carried out in such a manner as to protect the samples, sampling instruments, and the containers in which the samples are placed, from contamination from rain, dust, etc. If walking on grain cannot be avoided, precautions in the form of protective clothing should be taken to prevent contamination of the grain.

4 Instruments

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4.1 General

Many different types of instrument are available. Those given in annex B and their dimensions are included, therefore, solely as a guide. Annex C is included to help in the selection of suitable sampling instruments. It is known that use of the various types of equipment can give rise to differing samples from the same lot.

Where possible, the type of equipment to be used and the procedures for its use shall be determined by agreement between the parties concerned.

The instruments listed in 4.2 to 4.4 are in general usage.

Pneumatic samplers should not be used for milled products.

All instruments used shall be suitable for the product being sampled.

4.2 Sampling from bulk

Use appropriate apparatus for obtaining increments from static bulk (e.g. hand-held spears, mechanical or air-assisted apparatus).

4.3 Sampling from bags

Use sack-type spears.

4.4 Mixing and dividing

Use shovels and dividing apparatus or automatic random dividing apparatus.

5 Location and time of sampling

The location and time of sampling shall be determined by agreement between the parties concerned.

6 Method of taking samples

6.1 General

Unless otherwise specified in the contract, consignments shall be considered in lots of a maximum of 500 t or such part thereof as constitutes a single consignment.

6.2 Sampling from bags

6.2.1 Unless otherwise specified in the contract or unless the practice at the port or elsewhere requires otherwise, increments shall be taken from different parts of a bag (for example top, middle and bottom) by means of a sack/bag spear from the number of bags specified in Table 1.

Table 1 — Number of bags to be sampled

Number of bags in consignment	Number of bags to be sampled
Up to 10	Each bag
10 to 100	10, taken at random
More than 100	Square root (approx.) of total number, taken according to a suitable sampling scheme ^a
^a See annex A.	

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6.2.2 Prepacked units are usually transported in outer cases or cartons containing a convenient number of units. The procedure applicable to bags (described in 6.2.1) shall be used to determine the appropriate number of outer cases or cartons to be sampled. If the total number of outer cases or cartons in the consignments does not exceed 1000, only one prepacked unit shall be taken from each of the outer cases taken for sampling.

6.2.3 Care shall be taken to ensure that a prepacked unit is taken in a random manner from the entire contents of the outer case or carton for sampling.

The selection of prepacked units occupying the same corresponding position in a number of outer cases or cartons shall be avoided.

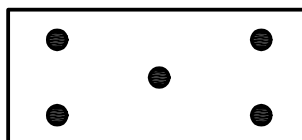
The prepacked units taken in this manner shall be considered as increments.

6.3 Sampling from rail or road wagons, lorries, barges or ships

6.3.1 Unless otherwise specified in the contract, each laden wagon, lorry, barge or ship shall be sampled.

6.3.2 Increments shall be taken throughout the whole depth of the lot. Suggested patterns are as follows.

a) Up to 15 t: 5 sampling points



b) From 15 t to 30 t: 8 sampling points

