International Standard ISO 7023

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Packaging — Sacks — Method of sampling empty sacks for testing

Emballages — Sacs — Méthode d'échantillonnage de sacs vides pour essais

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 7023 was developed by Technical Committee ISO/TC 122, *Packaging*, and was circulated to the member bodies in February 1982.

It has been approved by the member bodies of the following countries :

Australia	Germany, F. R.	South Africa, Rep. of
Austria	India	Spain
Belgium	Ireland	Sweden
Brazil	Israel	Turkey
Canada	Italy	United Kingdom
Denmark	Japan	USSR
Egypt, Arab Rep. of	Malaysia	Yugoslavia
Finland	Netherlands	
France	Romania	

No member body expressed disapproval of the document.

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Packaging — Sacks — Method of sampling empty sacks for testing

1 Scope and field of application

This International Standard specifies a method of obtaining a representative sample of empty sacks for testing.

This International Standard is applicable when sampling in order to assess the average quality of a consignment of empty sacks. The method is not suited to sampling for production control.

The method applies to all types of empty sacks.

NOTE — It should be noted that the sample is representative only of those sacks available for sampling. Considerable caution should be exercised when extrapolating the results from such sampling to a larger consignment.

2 References

ISO 186, *Paper and board — Sampling for testing.*

ISO 3951, *Sampling procedures and charts for inspection by variables for percent defective.*

3 Definitions

For the purpose of this International Standard, the following definitions apply.

3.1 lot : The aggregate of sacks which are of a single kind with specified characteristics, on which a judgement is desired (usually as to compliance with specification) and which are available for sampling.

NOTES

1 The number of sacks comprising a lot may be indicated on the invoice or agreed upon by the contracting parties.

2 When the number of sacks available for sampling is less than the lot size agreed or indicated on the invoice, the total number of sacks available may be taken as a lot subject to the caution given in the note to clause 1.

3.2 unit : The unit may be in the form of a bundle, bale, pallet load, container load, etc. One or more nominally identical units constitute a lot.

3.3 element : The element may be in the form of a bundle, bale, pallet load etc., but cannot be a single sack. One or more nominally identical elements constitute a unit.

3.4 sample : A specified number of sacks selected according to a prescribed procedure to represent the lot.

3.5 selected at random : Taken in such a way that each part of the whole has an equal chance of being selected.

4 Principle

Selection at random of a prescribed number of sacks from the lot following a two-stage procedure as follows :

a) Selection of a prescribed number of units from the lot (see 5.1).

b) Use of one of the following two procedures :

1) Where the unit is not subdivided into elements, selection of a prescribed number of sacks from each of these units (see 5.2.1).

2) Where the unit is subdivided into elements, selection of a prescribed number of elements from each of these units, then selection of a prescribed number of sacks from these elements (see 5.2.2).

5 Procedure

5.1 Selection of units

Determine and select the number of units to be sampled, according to table 1.

NOTE — Table 1 has been taken from ISO 186.

Table 1

Number of units (n) in the lot	Number of units selected	Method of selection
1 to 5	all	—
6 to 99	5	at random
100 to 399	$\frac{n}{20}$ *	at random
400 or more	20	at random

* In deciding the number of units to be selected, any remainder of less than 20 units shall be ignored.

The units selected shall be intact and in good external condition.

5.2 Selection of sacks

For each unit selected from the lot, proceed as follows :

5.2.1 When the unit is not subdivided into elements

Take at random an equal number of sacks from each unit so that the total number taken from the lot is not less than the number of sacks required for testing and conforms to the requirements of table 2.

NOTE — Relevant information for table 2 has been extracted from the first two columns in both tables I-A and II-A of ISO 3951.

Table 2

Number of sacks in the lot	Minimum number of sacks to be taken from the lot
Not more than 280	3
281 to 500	4
501 to 1 200	5
1 201 to 3 200	7
3 201 to 10 000	10
10 001 to 35 000	15
More than 35 000	20

5.2.2 When the unit is subdivided into elements

If there are 20 or more elements in each unit, assemble all the elements in the selected units and, using table 1, select the elements in the same way that the units were selected.

If there are less than 20 elements in each unit, select one element at random from each unit. At least one element should be selected from each unit.

Finally, take at random an equal number of sacks from each element selected so that the total number taken from the lot is not less than the number of sacks required for testing and conforms to the requirements of table 2.

6 Additional requirements

6.1 Precautions

The sacks selected shall be kept and handled so that there is no permanent change in their properties before testing.

6.2 Marking

Each sack that has been selected shall have adequate identification marks to prove its origin.

6.3 Re-sampling

6.3.1 If, as a result of an accident during sampling or testing, re-sampling is necessary, a new sample shall be taken, following the above procedure. Selection may then, however, be made from the same units as before unless agreed otherwise.

6.3.2 If re-sampling is needed for any other reason, the procedure adopted should follow this specification as closely as possible.

7 Test report

The report shall indicate the following particulars :

a) a reference to this International Standard;

b) the names and addresses of the purchaser and vendor;

c) the date and place of sampling;

d) the description of the lot;

e) the number of units in the lot;

f) the number of units selected;

g) the number of elements, if any, in a unit;

h) the number of elements selected;

j) the number of sacks in the lot;

k) the number of sacks selected;

m) any circumstances which might influence the results of future tests;

n) a reference corresponding to the identification marks on the sacks;

p) the signature of the person carrying out the sampling;

q) any deviation from this International Standard.