
INTERNATIONAL STANDARD



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Textile fibres — Some methods of sampling for testing

Fibres textiles — Diverses méthodes d'échantillonnage en vue des essais

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 38 has reviewed ISO Recommendation R 1130 and found it technically suitable for transformation. International Standard ISO 1130 therefore replaces ISO Recommendation R 1130-1969 to which it is technically identical.

ISO Recommendation R 1130 was approved by the Member Bodies of the following countries :

Australia	India	Romania
Belgium	Iran	Spain
Canada	Israel	Sweden
Colombia	Japan	Switzerland
Cuba	Korea, Rep. of	Thailand
Czechoslovakia	New Zealand	Turkey
Denmark	Norway	United Kingdom
Egypt, Arab Rep. of	Poland	U.S.A.
France	Portugal	U.S.S.R.
Hungary	South Africa, Rep. of	

The Member Bodies of the following countries expressed disapproval of the Recommendation on technical grounds :

Germany
Netherlands*

* Subsequently, this Member Body approved the Recommendation.

The Member Bodies of the following countries disapproved the transformation of ISO/R 1130 into an International Standard :

Germany
Hungary
U.S.S.R.

Textile fibres – Some methods of sampling for testing

0 INTRODUCTION

No single technique of sampling can be devised that will serve in all circumstances. Sampling from a bale of cotton, for example, presents problems quite different from those encountered in sampling from a consignment of yarn packages, while sampling from a card web is again different from either.

If the fibres in the bulk have been well mixed, so that there is no variation in composition from one part to another, i.e. the individual fibres are distributed at random, the sample can without disadvantage be taken from one place anywhere in the bulk.

If the fibres in the bulk are not known to have been well mixed, so that the composition may vary from one part to another, a sample taken from any one place would not be representative of the whole bulk.

A selection of methods is therefore presented, illustrating techniques that have been found acceptable in meeting the commoner types of problem encountered in sampling for the assessment of fibre quality. Methods peculiar to the requirements of research are not included, nor are such special techniques as have to be used, for example, in sampling of wool from the fleece, or cotton from the seed.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies several methods for preparing laboratory samples of fibres, and presents a limited treatment of the problem of drawing specimens for testing.

The field of application of each method is given at the beginning of the clause dealing with the method.

It is not possible for the coverage of each individual procedure to be fully comprehensive; in many instances, the selection of test samples or test specimens must necessarily be covered by the appropriate method of test.

The selection of length-biased samples is not within the scope of this International Standard, nor are particular requirements relating to the determination of commercial weights.

An annex and tables are given in this International Standard for general guidance in determining the size of the test sample to be taken in order that the determined sample mean shall have given confidence limits.

2 GENERAL DEFINITIONS

For the purposes of this International Standard the following general definitions apply. Definitions particular to different types of fibres will be found in the appropriate clause.

2.1 individual : Any single fibre that might be taken for the purpose of measurement.

2.2 population : The aggregate of individuals that it is desired to characterize in one or more particulars (for example : fibres contained in a bale of cotton; all the constituent fibres in a set of yarn cops).

2.3 zoning : When the population to be sampled is known to vary from part to part with respect to the property to be investigated, the individuals or groups of individuals in the population are taken at random from within the different parts or zones, chosen so that all variations of the property are represented in due proportion. This operation is known as zoning.

2.4 laboratory sample : A sample intended to be representative of a large bulk of material, in the state in which it is sent to the laboratory. A convenient size of sample for many types of test involving only small test specimens is about 25 to 50 g; a larger amount will be required for tests involving relatively large test specimens.

2.5 laboratory test sample : That portion of fibres taken from the laboratory sample in such a way as to ensure its representative character and to provide a quantity small enough to be easily convertible into test specimens.

2.6 test specimen : That part of the laboratory sample (yarns, fibres, etc.) which is tested at one time.

2.7 numerical sample : A sample in which all fibres in the population have an equal chance of being represented.

2.8 length-biased sample : A sample in which the chance of any fibre of the population being represented is proportional to the length of that fibre.