

STANDARD

9184-1

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**Paper, board and pulps — Fibre furnish
analysis —**

Part 1:
General method

*Papier, carton et pâtes — Détermination de la composition fibreuse —
Partie 1: Méthode générale*



Reference number
ISO 9184-1:1990(E)

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.

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 9184-1 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*.

ISO 9184 consists of the following parts, under the general title *Paper, board and pulps — Fibre furnish analysis*:

- *Part 1: General method*
- *Part 2: Staining guide*
- *Part 3: Herzberg staining test*
- *Part 4: Graff "C" staining test*
- *Part 5: Lofton-Merritt staining test (modification of Wisbar)*
- *Part 6: Weight factors by fibre coarseness method*
- *Part 7: Weight factors by comparison method*

Part 1 gives general instructions for the performance of fibre furnish analysis. It should be used in conjunction with the staining guide (see part 2) and the staining tests (see parts 3 to 5).

Additional parts of this International Standard will be published if required by the development of new kinds of fibres or new staining tests.

Annexes A and B of this part of ISO 9184 are for information only.

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International Organization for Standardization
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Paper, board and pulps — Fibre furnish analysis —

Part 1: General method

1 Scope

This part of ISO 9184 specifies the general performance of the test for fibre furnish analysis (see 3.1) of paper, board and pulps.

It is applicable to all kinds of pulps and to most papers and boards, including those containing more than one kind of fibre, taking into account different pulping processes.

This method is less suitable to heavily impregnated or highly coloured papers and boards, which cannot be dispersed or decoloured without affecting the structure or the staining reactions of the fibres.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 9184. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9184 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9184-2:1990, *Paper, board and pulps — Fibre furnish analysis — Part 2: Staining guide.*

3 Definitions

For the purposes of this part of ISO 9184, the following definitions apply.

3.1 fibre furnish analysis: Determination of the fibre components of paper, board and pulp samples as regards the species of fibres and the method of processing.

The fibre furnish analysis may be carried out qualitatively or quantitatively.

3.2 fibre coarseness, c : Means mass (oven dry) per unit length for a particular type of fibre, generally expressed in milligrams per metre.

3.3 weight factor, f : The ratio of the fibre coarseness of a particular type of fibre to that of a reference fibre.

NOTE 1 Traditionally, cotton staple (rag) fibre was selected as the reference fibre to which all other fibres were compared. The weight factor of cotton fibre was taken as 1,00, and the fibre coarseness of that fibre was determined to be 0,180 mg/m. The weight factor of a particular type of fibre can be derived from its fibre coarseness by the expression

$$f = \frac{c}{0,180}$$

where

f is the weight factor;

c is the fibre coarseness, in milligrams per metre.

4 Principle

The fibre furnish analysis is carried out under the microscope on a small quantity of stained fibres representative of the sample being tested:

- qualitatively, on the basis of the stain reactions and the morphological characteristics of the fibres;
- quantitatively, by counting the number of crossings of various kinds of fibres with the counting line and by transforming the number of