
**Pulps — Determination of mass fraction
of fines**

Pâtes — Détermination de la fraction massique des fines



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Published in Switzerland

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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 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10376 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 5, *Test methods and quality specifications for pulps*.

Introduction

This International Standard has been prepared to make it possible to determine the fines mass fraction of mechanical and chemical pulps. The greater tendency of the fines fraction to pass through the wire during sheet formation and to be recycled leads to an accumulation of fines in the headbox. The extent of this buildup is an indication of the retention performance of the machine and affects, for example, drainage, felt filling and save-all loading. The fines mass fraction in the pulp has also very often an effect on the properties of the end product, e.g. paper or board.

NOTE This International Standard involves a more precise determination, i.e. a lower coefficient of variation of repeated determinations is achieved (see Annex B), compared to the use of a McNett apparatus in which the fines mass fraction is obtained from the difference between the total mass and the sum of the fibre fractions (see Reference [3] in the Bibliography).

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Pulps — Determination of mass fraction of fines

1 Scope

This International Standard describes the procedure for determining the fines mass fraction of all kinds of pulp by means of a perforated metal plate or a single-screen fibre classifier (Dynamic Drainage Jar or similar). The screening procedure is the same for all pulps, although the mass of the test portion and the total volume of water for screening are not the same.

NOTE The procedure is also applicable for most kinds of paper samples, provided that it is possible to fully disintegrate the sample.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4119, *Pulps — Determination of stock concentration*

ISO 5263-1, *Pulps — Laboratory wet disintegration — Part 1: Disintegration of chemical pulps*

ISO 5263-2, *Pulps — Laboratory wet disintegration — Part 2: Disintegration of mechanical pulps at 20 °C*

ISO 5263-3, *Pulps — Laboratory wet disintegration — Part 3: Disintegration of mechanical pulps at ≥ 85 °C*

ISO 7213, *Pulps — Sampling for testing*

3 Terms and definitions

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

3.1

fines

fraction of a pulp which passes a screen (nominal aperture of 76 μm) or a perforated plate (holes of 76 μm)

NOTE There is no significant difference in the results obtained using a perforated plate and a wire screen in the fibre classifier, see Annex B.

WARNING — If the sample contains mineral fillers, the filler particles will normally appear in the fines fraction.