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Pulps — Preparation of laboratory sheets for the measurement of optical properties

Pâtes — Préparation des feuilles de laboratoire pour le mesurage des propriétés optiques

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*.

This third edition cancels and replaces the second edition (ISO 3688:1999), which has been technically revised.

The main changes are as follows:

— D65 brightness, whiteness and colour measurements have been included in the scope;

— recycled pulps have been removed from the scope;

— subclause 7.2 on the preparation of the sheets has been revised;

— pH adjustment has been changed from acid to neutral conditions;

— the number of sheets to be prepared has been updated in order to be consistent with subsequent measurements of optical properties.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The reflectance factors of laboratory sheets, and consequently all optical properties derived from diffuse reflectance factor measurements depend on the manner of preparation of those sheets and also on the conditions of measurement, particularly the spectral and geometric characteristics of the instrument used.

Pulps — Preparation of laboratory sheets for the measurement of optical properties

1 Scope

This document specifies two procedures for the preparation of laboratory sheets prior to measuring optical properties. One is the preparation of pads in a Büchner funnel using a filter paper or a wire screen and the other one is the preparation of laboratory sheets in a standard sheet former (conventional or Rapid Köthen).

This document is applicable to all wood pulps and to most other types of pulp.

It is not applicable to pulps with very long fibres, such as those made from unshortened cotton, flax and similar materials, unless they are reduced to a suitable fibre length (about 2 mm) before performing the methods.

It is not applicable to recycled pulps (see ISO 21993).

It is not applicable to opacity measurements or to the determination of light scattering and absorption coefficients.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3689, *Paper and board — Determination of bursting strength after immersion in water*

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 degrees C*

ISO 5269-1, *Pulps — Preparation of laboratory sheets for physical testing — Part 1: Conventional sheet-former method*

ISO 5269-2, *Pulps — Preparation of laboratory sheets for physical testing — Part 2: Rapid-Köthen method*

ISO 7213, *Pulps — Sampling for testing*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/