
**Paper, board and pulps — General
requirements for the competence of
laboratories authorized for the issue
of optical reference transfer standards
of level 3**

*Papiers, cartons et pâtes — Exigences générales concernant la
compétence des laboratoires autorisés pour la délivrance des étalons
de référence de transfert optique de niveau 3*



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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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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 on 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 the following URL: 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 4094:2005). This version underwent major changes and now follows the requirements and adopts the format of ISO/IEC 17025.

Introduction

The main objectives of standardization of testing methods are to create the means by which comparable results can be obtained on different occasions, with different instruments and in different laboratories, and to control the processes that determine the acceptability of a product. Most testing methods for paper, board and pulps are linked by some type of reference standards to which the numerical results are to be related. In many cases, the comparison is made by means of readily available instruments of appropriate accuracy: for example, a balance with certified weights, a chronometer, a calibrated length-measuring device such as a micrometer, etc. However, in certain instances, the relation to the reference standard may not be obvious, or there may be practical problems in measuring particular properties; the test method should therefore include additional instructions for ensuring reasonable accuracy of the results. This may be accomplished with the aid of transfer standards, when the results are related either to certain properties of a unique reference standard, or to results obtained at specified laboratories entrusted with the performance of certain delicate measurements. Standardizing Laboratories and Authorized Laboratories act as links in supplying the transfer standards required.

The acceptance of testing and calibration results between countries will be facilitated if specified laboratories authorized to issue optical reference transfer standards comply with this document or if they obtain accreditation from bodies which have entered into mutual recognition agreements with equivalent bodies in other countries using this document.

The use of this document will facilitate cooperation between specified laboratories authorized to issue optical reference transfer standards and other bodies, and assist in the exchange of information and experience, and in the harmonization of calibration standards and procedures.

A laboratory's fulfilment of the requirements of this document means the laboratory meets both the general and specific technical competence requirements, and the management system requirements that are necessary for it to consistently deliver technically valid results.

Paper, board and pulps — General requirements for the competence of laboratories authorized for the issue of optical reference transfer standards of level 3

1 Scope

This document provides both general requirements and specific requirements ([Annex A](#)) for laboratories seeking to become “Authorized Laboratories (ALs)” and to maintain their Authorized Laboratory status for the issue of optical reference transfer standards of level 3. This document follows the requirements and adopts the format of ISO/IEC 17025, with the aims of:

- a) establishing and maintaining international optical reference transfer standards of level 2 (IR2) traceable to an international optical reference primary standard of level 1 (IR1) maintained by a standardizing laboratory;
- b) distributing traceability required to achieve inter-laboratory agreement in the results of test methods specified in International Standards for optical properties of paper, board or pulp;
- c) participating in the design and development of new methods and international harmonization of procedures.

When a laboratory does not undertake one or more of the activities covered by this document, such as sampling and the design/development of new methods, the requirements of those clauses do not apply.

This document is for use by specified laboratories authorized to issue optical reference transfer standards in developing their management system for quality, administrative and technical operations. Laboratory customers, regulatory authorities and accreditation bodies can also use it in confirming or recognizing the competence of laboratories.

NOTE It might be necessary to explain or interpret certain requirements in this document to ensure that the requirements are applied in a consistent manner. Guidance for consistent application can be obtained from Technical Committee ISO/TC 6.

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/IEC 17000, *Conformity assessment — Vocabulary and general principles*

ISO 2469, *Paper, board and pulps — Measurement of diffuse radiance factor (diffuse reflectance factor)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 17000 and ISO 2469 and the following apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>