
**Paper, board and pulps —
Determination of water-soluble
chlorides**

*Papier, carton et pâtes — Détermination des chlorures solubles
dans l'eau*

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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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 6, *Paper, board and pulps*.

This third edition cancels and replaces the second edition (ISO 9197:2006), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- the text in [5.4](#) on the preparation of nitric acid has been corrected;
- the precision statement has been moved to [Annex A](#).

Paper, board and pulps — Determination of water-soluble chlorides

1 Scope

This International Standard specifies a method for the determination of water-soluble chlorides in all types of paper, board and pulp. The lower limit of the determination is 20 mg of chloride ion per kilogram of dry sample.

2 Normative references

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

ISO 186, *Paper and board — Sampling to determine average quality*

ISO 287, *Paper and board — Determination of moisture content of a lot — Oven-drying method*

ISO 638, *Paper, board and pulps — Determination of dry matter content — Oven-drying method*

ISO 7213, *Pulps — Sampling for testing*

3 Terms and definitions

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

3.1

water soluble chlorides

amount of chloride ion that is extracted with cold water and determined under the conditions specified

4 Principle

Pieces of the sample under test are extracted with water at room temperature in a disintegrator. The resulting suspension is filtered and an aliquot is used for determination of the chloride ion content by ion chromatography.

5 Reagents

During the analysis, use only reagents of recognized analytical quality and only water as specified in [5.1](#).

5.1 Distilled or demineralized water, conductivity less than 0,2 mS/m.

5.2 Chloride stock solution, $c(\text{Cl}) = 1\,000\text{ mg/l}$. Dry a portion of potassium chloride, (KCl), at 140 °C. Transfer 210,2 mg thereof to a 100 ml volumetric flask, dissolve the KCl and dilute to the mark with water ([5.1](#)). Commercially available standard solutions may be used.

5.3 Chloride matching solution. Dilute the chloride stock solution ([5.2](#)) to a mass fraction of chloride ion of, for example, $c(\text{Cl}) = 10\text{ mg/l}$. Do not use chloride matching solutions that are more than one week old.