
**Paper, board and pulp —
Determination of water-soluble
sulfates**

Papier, carton et pâte — Détermination des sulfates solubles dans l'eau



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Foreword

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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).

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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 9198:2001), which has been technically revised. The main changes compared to the previous edition are as follows:

- In 6.4, the addition of the option of filtering the suspension through a medium coarseness filter paper prior to withdrawing an aliquot with a syringe.

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.

Paper, board and pulp — Determination of water-soluble sulfates

1 Scope

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

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 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.

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/>

3.1

water-soluble sulfates

in pulp, paper and board, the amount of sulfate ion that is extracted with water at 23 °C and determined under the conditions specified

4 Principle

Pieces of the sample are extracted with water at 23 °C in a disintegrator. An aliquot of the resulting suspension is used for determination of the sulfate ion content by ion chromatography.

5 Reagents

Use only reagents of recognized analytical quality and only water as specified in 5.1.

5.1 Distilled water or deionized water, of conductivity less than 0,1 mS/m at 25 °C.

5.2 Sulfate stock solution, $r(\text{SO}_4^{-2}) = 1\,000 \text{ mg/l}$.

Dry a portion of potassium sulfate (K_2SO_4) at 140 °C. Transfer $181,5 \text{ mg} \pm 2 \text{ mg}$ thereof to a 100 ml volumetric flask, dissolve the salt and make up to the mark with water (5.1).