INTERNATIONAL STANDARD

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Pulps — Standard tap water for drainability measurements — Conductivity 40 mS/m to 150 mS/m

Pâtes — Eau du robinet normalisée pour mesurages de l'aptitude à l'égouttage — Conductivité comprise entre 40 mS/m et 150 mS/m

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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 14436 was prepared by Technical Committee ISO/TC 6, *Paper, board and pulps*, Subcommittee SC 5, *Test methods and quality specifications for pulps*.

Introduction

It is well known that even small amounts of electrolytes (salts) influence the drainability properties of a pulp suspension (References [2] and [3] in the Bibliography). The common practice in pulp testing has been to prepare pulp suspensions using distilled water. Since many pulps contain some electrolytes this practice results in salt concentrations in the pulp suspension that vary with the pulp under test. By using water containing a specified amount of electrolytes when preparing the pulp suspension, the influence from salts arriving with the pulp is greatly reduced, see Annex A. By raising the salt concentration to such a level that the electrical conductivity of the pulp suspension exceeds 40 mS/m, the influence from small variations in salt concentration becomes negligible. For that reason, a standard tap water based on a divalent ion (Mg^{2+}) and having a conductivity exceeding 40 mS/m has been chosen in this International Standard.

NOTE The physical properties of pulp are affected by the presence and type of cations (Reference [4] in the Bibliography) in standard tap water.

It is important to have reliable drainability results, since in the evaluation of pulp quality the physical properties of laboratory sheets are often plotted as a function of drainability (SR or CSF) and are often reported at a certain SR value (Schopper Riegler-value) or a certain CSF-value (Canadian Standard Freeness-value).

The standard tap water can be used in the disintegration, the beating, and for the measurement of drainability properties. It must, however, be stated in the relevant International Standard whether the standard tap water described in this International Standard must be used.

Pulps — Standard tap water for drainability measurements — Conductivity 40 mS/m to 150 mS/m

1 Scope

This International Standard describes the specification and preparation of standard tap water, of conductivity between 40 mS/m and 150 mS/m, for drainability measurements.

This International Standard is applicable to all kinds of pulps.

NOTE ISO 14487[1] describes the specification and preparation of standard distilled/deionized water.

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 6587, *Paper, board and pulps — Determination of conductivity of aqueous extracts*

3 Terms and definitions

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

3.1
standard tap water
distilled, deionized or tap water, having a conductivity between 40 mS/m and 150 mS/m achieved by adding a magnesium salt to the water, and having concentrations of iron, manganese and/or aluminium not exceeding 1 mg/l

4 Principle

The standard tap water is prepared by adding magnesium sulfate to distilled water, deionized water or any other type of water that meets the requirements in this International Standard (see 5.1) until the specified electrical conductivity of the water is reached.