SLOVENSKI STANDARD
SIST EN 20638:2000

01-april-2000

Vlaknine - Določ evanje suhe snovi (ISO 638:1978)

Pulps - Determination of dry matter content (ISO 638:1978)

Zellstoff(brei)e - Bestimmung des Trockengehaltes (ISO 638:1978)

Pâtes - Determination de la teneur en matieres seches (ISO 638:1978)

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English version

Pulps - Determination of dry matter content (ISO 638:1978)

Pâtes - Détermination de la teneur en matières sèches (ISO 638:1978)

Zellstoff(brei)e - Bestimmung des Trockengehaltes (ISO 638:1978)

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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INTERNATIONAL STANDARD 638

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Pulps — Determination of dry matter content

Pâtes — Détermination de la teneur en matières sèches

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 638 was developed by Technical Committee ISO/TC 6, *Paper, board and pulps*, and was circulated to the member bodies in September 1977.

It has been approved by the member bodies of the following countries:

Australia	India	Poland
Austria	Iran	Romania
Belgium	Ireland	Spain
Canada	Israel	Sweden
Chile	Italy	Switzerland
Czechoslovakia	Kenya	Turkey
Egypt, Arab Rep. of	Korea, Rep. of	United Kingdom
Finland	Mexico	U.S.A.
France	Netherlands	U.S.S.R.
Germany, F.R.	New Zealand	
Hungary	Norway	

No member body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 638-1967, of which it constitutes a technical revision.

Printed in Switzerland

Pulps – Determination of dry matter content

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the dry matter content of pulp samples.

This method is applicable to moist or air-dry pulp which does not contain any appreciable quantity of matter, other than water, volatile at the temperature specified for the drying. It is used, for example, with pulp samples taken for chemical and physical tests in the laboratory, which require concurrent determination of dry matter content.

This method is not applicable to the determination of the dry matter content of slush pulp or to the determination of the saleable mass of pulp lots.

2 DEFINITION

For the purpose of this International Standard, the following definition applies.

dry matter content of a pulp sample : The ratio of the mass of a test piece, after drying to constant mass at a temperature of 105 ± 2 °C under specified conditions, to its mass at the time of sampling. The dry matter content is expressed as a percentage.

3 APPARATUS

Ordinary laboratory apparatus, including :

3.1 Weighing containers, water-vapour proof and with tightly fitting lids.

3.2 Oven, capable of being controlled at 105 ± 2 °C, and suitably ventilated.

3.3 Balance, with an accuracy of 0,001 g.

3.4 Desiccator.

4 PREPARATION OF SAMPLE

Cut or tear the pulp sample into pieces of suitable size, taking into account the method of test for which the dry matter content is to be determined. In handling the pulp, special precautions shall be taken to avoid any change in moisture content. Samples which have been kept in water-vapour proof containers shall be quickly cut and weighed to minimize any variation in moisture content.

5 PROCEDURE

Carry out all weighings to the nearest 0,001 g. Weigh about 10 g of pulp in the closed, previously dried and weighed container (3.1). After weighing, open the container and place it with test piece and lid in the oven (3.2) and heat at 105 ± 2 °C for a sufficiently long period (see the note) until constant mass is reached. The test piece is considered to have reached constant mass when the difference between two consecutive weighings is not more than 0,1 % of the original wet mass of the test piece. The drying period between two consecutive weighings shall be at least one-half of the minimum initial drying time.

After drying, fit the lid on to the container and allow the test piece to cool in the desiccator (3.4) for 45 min. After cooling, equalize the air pressures outside and inside the container by quickly half-opening and reclosing the lid. Weigh the container and its contents.

NOTE – Do not introduce new test pieces into the oven during drying. The preliminary drying period should be not less than 3 h and not more than 16 h.

Carry out two determinations or as many as stated in the method of test for which the dry matter content is determined.

6 EXPRESSION OF RESULTS

The dry matter content X, expressed as a percentage by mass, is given by the formula

$$X = \frac{m_2}{m_1} \times 100$$

where

m_1 is the mass, in grams, of the pulp before drying;

m_2 is the mass, in grams, of the pulp after drying.

Express the dry matter content to the first decimal place as a mean of all parallel determinations.

7 TEST REPORT

The test report shall include the following particulars :

a) reference to this International Standard;

b) all the information necessary for complete identification of the sample;

c) the results, expressed as a percentage;

d) any unusual features observed in the course of the test;

e) any operations not specified in this International Standard, or regarded as optional, which might have affected the results.