



SLOVENSKI STANDARD

SIST EN 1164:2000

01-december-2000

Feather and down - Test methods - Determination of the turbidity of an aqueous extract

Feather and down - Test methods - Determination of the turbidity of an aqueous extract

Federn und Daunen - Prüfverfahren - Bestimmung der Trübung eines wässrigen Extraktes

Plumes et duvets - Méthodes d'essais - Détermination de la turbidité d'un extrait aqueux

Ta slovenski standard je istoveten z: EN 1164:1998

SIST EN 1164:2000
<https://standards.iteh.ai/catalog/standards/sist/cc1416a9-8923-4984-b35e-f1488482cdf1/sist-en-1164-2000>

ICS:

59.040 Pomožni materiali za tekstilije Textile auxiliary materials

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1164

September 1998

ICS 59.040; 67.120.20; 97.160

Descriptors: stuffings, feathers, tests, aqueous extract, transparency, measurements, turbidity, cleanliness checks, testing conditions, procedure

English version

Feather and down - Test methods - Determination of the
turbidity of an aqueous extract

Plumes et duvets - Méthodes d'essais - Détermination de la
turbidité d'un extrait aqueux

Federn und Daunen - Prüfverfahren - Bestimmung der
Trübung eines wässrigen Extraktes

This European Standard was approved by CEN on 13 August 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 222 "Feather and down as filling material for any article, as well as finished articles filled with feather and down", the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 1999, and conflicting national standards shall be withdrawn at the latest by March 1999.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This European Standard specifies a method to check one of the cleanliness aspects of feather and down ready to be used through the determination of the amount of undissolved and solved matter present in the aqueous extract.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 20139 Textiles - Standard atmospheres for conditioning and testing (ISO 139:1973)

EN 20187 Paper, board and pulps - Standard atmosphere for conditioning and testing and procedure for monitoring the atmosphere and conditioning of samples (ISO 187:1990)

EN ISO 3696 Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)

3 Definitions

For the purposes of this standard the following definition applies:

turbidity

reduction of transparency of the filtrate suspension caused by the presence of undissolved and solved matter

4 Principle

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A test specimen having a specified mass is mixed in the water in the ratio 1:100 and correctly shaken. After filtration, the aqueous extract is gradually transferred in a graduated cylinder, on which bottom there is a cross of specified dimensions and the height of the suspension shall be determined when the cross is no more visible.

Go on filling the graduated cylinder for 20 mm at least and then let the aqueous extract gradually flow down recording the height when the cross is visible again. The turbidity is given by the mean height of the determination during upward and downward phases.

5 Reagents

Water grade 3 in accordance with EN ISO 3696

6 Conditioning and testing

Conditioning and testing shall be carried out in accordance with EN 20139 and the temperature and relative humidity shall be measured in accordance with EN 20187.

7 Apparatus

7.1 The turbidity meter (see Figure 1) consists of two parts:

7.1.1 A graduated transparent cylinder, higher than 300 mm and from 30 to 35 mm in diameter, graduated in 1 mm divisions. The cylinder is equipped with a pipe allowing the liquid to go in and out the measuring device.

On the flat bottom of the cylinder is fixed a disc of plastic material on which two double black lines one ($1 \pm 0,02$) mm apart, long as the cylinder diameter, fast to light and resistant to water, and large ($0,5 \pm 0,02$) mm and other two double black lines, with the same dimensions, perpendicular to the first ones.

The cylinder is placed on a top with a white surface.

7.1.2 A container, capacity 1000 ml, mounted on a lifter acting in a communicative vessel system, connected to the turbidity meter by a flexible tube connected to the pipe (see 7.1.1).

NOTE: The contrast of the two double black lines and the white material should be assessed for clarity.

7.2 Analytical balance accurate to at least 10 mg

7.3 Tumbler jar, capacity 2000 ml

7.4 Beaker, capacity 2000 ml

7.5 Shaking machine with 150 shakes per minute and with shaking swing of 40 mm or tumbling machine with 150 min^{-1}

7.6 Sintered (fritted) filter, pore size index P 160 10 cm diameter (see ISO 4793)

7.7 Light source: north sky light or an equivalent source of illumination of about at least 600 lx

7.8 Lux meter giving an indication of the room light

8 Procedure

8.1 Place conditioned test specimen of representative part of the laboratory bulk sample (see prEN 1883) with a mass of ($10 \pm 0,1$) g in the tumbler jar, containing 1000 ml of water (see clause 5), the jar is tumbled at room temperature for (60 ± 5) min.

8.2 Without wringing the water in excess from the test specimen, filter the suspension through the sintered filter (7.6) and put the filtrate into the beaker (7.4):

8.3 Before starting the test check that the vase is in the low position.

8.4 Pour the liquid into the container.

8.5 Gradually lift up the container so that the liquid flows into the graduated cylinder.

8.6 Observe from the top through the liquid, by normal vision or vision corrected to normal, the height of the filtrate as soon as the cross is no longer visible by the operator and record the height on the graduated cylinder in millimeter as H_1 .

8.7 Raise the container for at least 20 mm more.

8.8 Gradually lower the container in such a way the liquid flows out of the graduated cylinder.

8.9 Observe the height of the filtrate as soon as the cross is visible again by the operator and record the height on the graduated cylinder in millimeter as H_2 .

8.10 Compare H_1 and H_2 . If H_1 and H_2 differ more than 10 mm repeat the procedure from 8.4. If the difference persists, change the operator. If it cannot be cured, note the individual values in the test report.

8.11 Register the mean value of H_1 and H_2 .

8.12 Repeat the test on at least another test specimen. The procedure described from 8.2 to 8.12 shall be repeated by another operator.

9 Expression of results

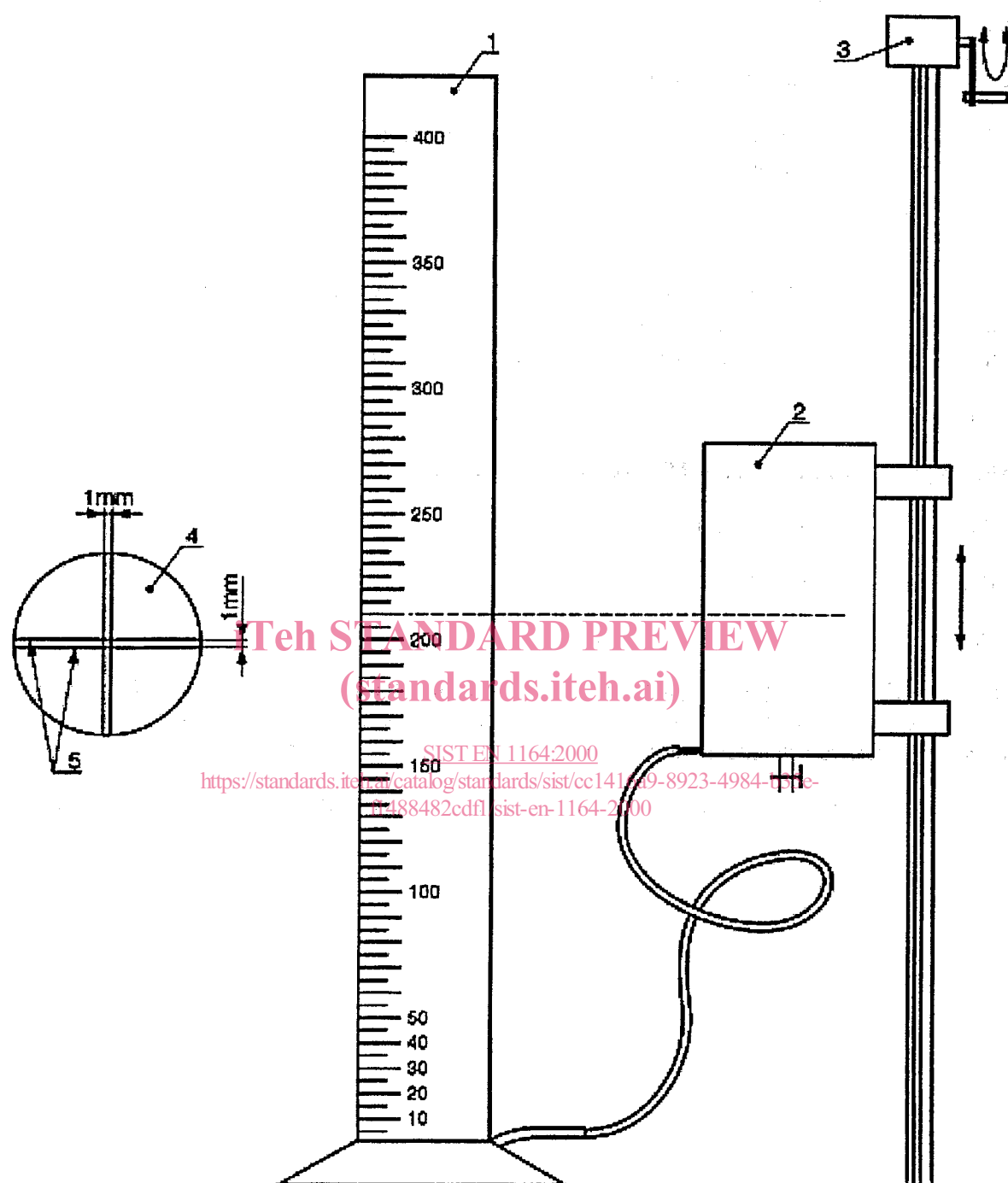
Calculate:

- the mean values of H_1 in millimetres, with the approximation to the millimeter;
- the mean values of H_2 in millimetres, with the approximation to the millimeter;
- the general mean of H_1 and H_2 in millimeters, rounded to the nearest multiple of 5.

10 Test report

The test report shall include at least the following information:

- the reference to this standard;
- date and place of testing;
- identification mark of the sample tested;
- the general mean of H_1 and H_2 in millimeters, rounded to the nearest multiple of 5. When the difference between the mean of H_1 and the mean of H_2 is greater than 10 mm, in addition to the general mean these two means too shall be reported in accordance with clause 9;
- any deviation from the standard procedure and any other circumstances that may have affected the result.



- 1- graduated cylinder;
- 2- container
- 3- rod equipped with a device to rise and low the container;
- 4- disc with the cross on the bottom of the graduated cylinder
- 5- double black line

Figure 1: Turbidity meter