

## Feather and down - Test methods - Determination of water-soluble chlorides

The European Standard EN 1165:1996 has the status of a Swedish Standard. This document contains the official English version of EN 1165:1996.

Swedish Standards corresponding to documents referred to in this Standard are listed in "Catalogue of Swedish Standards", annually issued by SIS. The Catalogue lists, with reference number and year of Swedish approval, International and European Standards approved as Swedish Standards as well as other Swedish Standards.

## Fjäder och dun - Provningsmetoder - Bestämning av vattenlösliga klorider

Europastandarden EN 1165:1996 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 1165:1996.

Motsvarigheten och aktualiteten i svensk standard till de publikationer som omnämns i denna standard framgår av "Katalog över svensk standard", som årligen ges ut av SIS. I katalogen redovisas internationell och europeiska standarder som fastställts som svenska standarder och övriga gällande svenska standarder.

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ICS 67.120.20;97.160

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Descriptors: stuffings, feathers, tests, determination, chlorides, soluble matter, water

English version

**Feather and down - Test methods - Determination  
of water-soluble chlorides**

Plumes et duvets - Méthodes d'essai –  
Détermination des chlorures solubles dans l'eau

Fedem und Daunen – Prüfverfahren –  
Bestimmung von wasserlöslichen Chloriden

This European Standard was approved by CEN on 1996-05-09. 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.

The European Standards exist 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.

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**CEN**

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

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## Foreword

This European Standard has been prepared by the 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 February 1997, and conflicting national standards shall be withdrawn at the latest by February 1997.

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

## 1 Scope

This European Standard specifies a method for determining the water-soluble chloride content of feathers and down.

The techniques involved are not adequate for determining significant differences where the water-soluble chlorides found by this method are below 50 mg/kg.

## 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.

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| 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) |
| ISO 385-3 | Laboratory glassware - Burettes - Part 3: Burettes for which a waiting time of 30 s is specified   |
| ISO 648   | Laboratory glassware - One-mark pipettes   |
| ISO 3696  | Water for analytical laboratory use - Specification and test methods   |
| ISO 3819  | Laboratory glassware - Beakers   |
| ISO 4793  | Laboratory sintered (fritted) filters - Porosity grading, classification and designation   |

## 3 Definitions

For the purposes of this standard, the following definition applies:

**water-soluble chlorides content:** It is the amount of chloride ions extracted and determined by means of a titration technique under conditions specified in this standard.

## 4 Principle

The test specimen is extracted with ambient temperature water for 1 h. The extract is filtered and its chloride ion concentration is determined by a titration technique with standard silver nitrate. To the aqueous extract at ambient temperature is added a small quantity of potassium chromate as an indicator.

## 5 Reagents

5.1 Water grade 2, conforming with ISO 3696

5.2 0,1 mol/l nitric acid

5.3 0,01 med/l silver nitrate: to be stored in a brown bottle

5.4 phenolphthalein indicator, solution 1,0% of mass

5.5 potassium chromate, solution 3,9 g/l

5.6 sodium carbonate solution, 10,6 g/l

## 6 Apparatus

Glassware and other apparatus shall be clean. Boil flasks, beakers and funnels shall be cleaned in distilled water, Forceps and scissors for individual sample preparation shall be kept clean in the same way.

6.1 Analytical balance (with sensitivity of 0,1 mg)

6.2 Tumbler jar, capacity 2000 ml

6.3 Beaker, capacity 2000 ml (in accordance with ISO 3819)

6.4 Shaking machine with 150 shakes per minute and with shaking swing of 40 mm or tumbling machine with 150 min<sup>-1</sup>

6.5 One-mark pipette, capacity 25 ml (in accordance with ISO 648)

6.6 Microburette, capacity 10 ml, graduated in 0,01 ml (in accordance with ISO 385-3)

6.7 Sintered (fritted) filter, pore size index P 100 (in accordance with ISO 4793) or chloride free medium paper filter

6.8 Glass funnel

6.9 Conical flasks, capacity 250 ml or 300 ml

6.10 Latex gloves or equivalent

6.11 Light source with wave length of 400-600 nm or yellow glasses

## 7. Preparation of the test specimen

7.1 Condition the laboratory bulk sample in accordance with EN 20139 and measure the temperature and relative humidity in accordance with EN 20187.

7.2 Clean protective gloves should be worn at all times when handling the individual sample and the test specimens prepared from it.