

## **Feather and down - Test methods - Determination of microbiological state**

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microbiological state

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1884:2001 sisaldab Euroopa standardi EN 1884:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1884:2001 consists of the English text of the European standard EN 1884:1998.</p> <p>This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This European Standard describes two methods to evaluate, after fabrication processes such as washing and sanitization, the elimination of pathogenic microorganisms of fecal and urinary origin: The dip-slide method used only as a routine control and a more complete method using selective media and permitting also testing of presence of clostrides and salmonella.</p>	<p><b>Scope:</b></p> <p>This European Standard describes two methods to evaluate, after fabrication processes such as washing and sanitization, the elimination of pathogenic microorganisms of fecal and urinary origin: The dip-slide method used only as a routine control and a more complete method using selective media and permitting also testing of presence of clostrides and salmonella.</p>
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**ICS** 59.040

**Võtmesõnad:** bacteria, bacteria count methods, culture media, feathers, microbiological analysis, stuffings, tests

ICS 59.040

Descriptors: Feather, down, microbiological state, testing.

**English version**

**Feather and down**

Test methods – Determination of microbiological state

Plumes et duvets – Méthodes d'essais –  
Détermination de l'état microbio-  
logique

Federn und Daunen – Prüfverfahren –  
Bestimmung des mikrobiologischen  
Zustandes

This European Standard was approved by CEN on 1998-08-13.

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.

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

**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 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.

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.

Annex A is informative.

## Introduction

Feather materials for filling which come from plucking of waterfowls and/or landfowls are, when raw, contaminated by pathogenic microorganisms of fecal and urinary origin (e.g. salmonellae, fecal streptococci, etc.). These are present in variable quantities, depending on the environment and to the hygienic conditions of breeding, plucking and storage packing.

Fabrication processes always comprise the dusting, washing and sanitization in order to eliminate the pathogenic micro-organisms and to ensure the protection of the consumer health.

This European Standard specifies two methods to evaluate the microbiological state of feather materials for filling: the first one is used only as routine control, while the second one is used when it is necessary to have complete and specific information on the microbiological state.

NOTE: Handling of microorganisms which are potentially hazardous requires a high degree of technical competence. Only personnel trained in microbiological techniques should carry out the test. Code of practice for disinfection, sterilization and personal hygiene are strictly observed.

It is recommended that workers should consult ISO 7218.

## 1 Scope

### 1.1 Dip-slide method

**1.1.1** This method describes the dip slide procedures, that uses two types of agar to test the presence of commensal bacteria and coliforms (gram negative). This procedure is suitable when a manufacturer requires a simple test to screen finished filling material hygiene.

**1.1.2** This method cannot be used to test the presence of sulphito-reducing clostrides (gram positive) and salmonella (gram negative).

### 1.2 Selective medium and count plate method

This method describes procedures that use different types of medium to verify the presence and quantity of:

- mesophilic aerobic bacteria (see 6.4)
- fecal streptococci (see 6.5)
- sulphite-reducing clostridium (see 6.6)
- salmonella (see 6.7).

This method, used for both raw and finished materials, gives more complete and specific information on the control of the microbiological state of the filling material than the dip slide method.

## 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 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 1883 Feather and down - Sampling in view of tests

EN 374-1 Protective gloves against chemicals and micro-organisms - Part 1: Terminology and performance requirements

EN 374-2 Protective gloves against chemicals and micro-organisms - Part 2: Determination of resistance to penetration

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 definitions apply:

**3.1 mesophilic aerobic bacteria content:** Quantity of microorganisms, chiefly bacteria, which develop in the presence of oxygen at a temperature of  $(30 \pm 2)^\circ\text{C}$ .

**3.2 faecal streptococci:** Kind of bacteria belonging to the family of Lactobacillaceae. The members of this kind are cocci (Gram positive).

**3.3 sulphite-reducing clostridium:** Kind of bacteria (clostridium) belonging to the family Bacillaceae. The members of this kind are rods (gram positive), anaerobic and sporigenic.

**3.4 salmonella:** Kind of bacteria belonging to the family of Enterobacteriaceae. The members of this kind are rods (Gram negative).

**3.5 initial extract:** Filtrate obtained from the treatment of the test specimen with the peptonic physiological solution in accordance with the conditions as prescribed.

**3.6 decimal dilutions:** Series of successive dilutions prepared from the initial extract (3.5)

**3.7 colony forming units (CFU):** Colony formed by millions of bacteria of the same species grown by multiplication of a single bacterial cell on a specific agar. This is visible to the naked eye and can have different shapes (lenticular, starry, etc.) of variable dimensions according to the species, the type of agar and the culture conditions.