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Irish Standard  
I.S. EN ISO 10139-1:2005

# Dentistry - Soft lining materials for removable dentures - Part 1: Materials for short-term use (ISO 10139-1:2005)

## I.S. EN ISO 10139-1:2005

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EN ISO 10139-1:2005/AC:2006

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EUROPEAN STANDARD

**EN ISO 10139-1:2005/AC**

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English version  
Version Française  
Deutsche Fassung

Dentistry - Soft lining materials for removable dentures - Part 1: Materials  
for short-term use (ISO 10139-1:2005/Cor.1:2006)

Art dentaire - Produits souples pour  
intradoss de prothèses dentaires amovibles -  
Partie 1: Produits pour usage à court terme  
(ISO 10139-1:2005/Cor.1:2006)

Zahnheilkunde - Weichbleibende  
Unterfütterungswerkstoffe für Prothesen -  
Teil 1: Werkstoffe für kurzzeitige  
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Ce corrigendum prendra effet le 12 avril 2006 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 12. April 2006 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.



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

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**I.S. EN ISO 10139-1:2005**  
**EN ISO 10139-1:2005/AC:2006 (E/F/D)**

## **English version**

### **Endorsement Notice**

The text of ISO 10139-1:2005/Cor.1:2006 has been approved by CEN as EN ISO 10139-1:2005/AC:2006 without any modifications.

## **Version française**

### **Notice d'entérinement**

Le texte de l'ISO 10139-1:2005/Cor.1:2006 a été approuvé par le CEN comme EN ISO 10139-1:2005/AC:2006 sans aucune modification.

## **Deutsche Fassung**

### **Anerkennungsnotiz**

Der Text von ISO 10139-1:2005/Cor.1:2006 wurde vom CEN als EN ISO 10139-1:2005/AC:2006 ohne irgendeine Abänderung genehmigt.

Durch die Übernahme der Technischen Korrektur 1:2006-03-01 für ISO 10139-1:2005 werden folgende Änderungen vorgenommen:

#### **7.3.1.2**

Ersetze „**Drei Becher**, mit einem Volumen von 100 ml.“  
durch „**Drei Becher**, jeder ausreichend groß, damit 100 ml Wasser die Probekörper (siehe 7.3.3) bedecken kann.“

#### **7.3.3 (3. Absatz, Linie 4)**

Streiche "100-ml-" vor "Becherglas".

#### **8.3 d)**

nach "Werkstoffs" füge den Text "und die Zeit, bei der eine elastische Rückstellung nach Verformung von 10 % erreicht wird (siehe Einleitung und 7.2.4)."



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INTERNATIONAL STANDARD ISO 10139-1:2005  
TECHNICAL CORRIGENDUM 1

Published 2006-03-01

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

# Dentistry — Soft lining materials for removable dentures — Part 1 Materials for short-term use

## TECHNICAL CORRIGENDUM 1

*Art dentaire — Produits souples pour intrados de prothèses dentaires amovibles —*

*Partie 1: Produits pour usage à court terme*

*RECTIFICATIF TECHNIQUE 1*

Technical Corrigendum 1 to ISO 10139-1:2005 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthetic materials*.

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*Page 5*

7.3.1.2

replace “**Three beakers**, of 100 ml capacity”

by “**Three beakers**, each of sufficient size that 100 ml of water covers the specimen (see 7.3.3)”.

*Page 8*

7.3.3 (on the page, paragraph 1, line 3)

delete “100 ml” before “beaker”.

*Page 9*

8.3 d)

after “properly” insert the text “and the time at which 10 % recovery is achieved (see Introduction and 7.2.4)”.

*This page is intentionally left BLANK.*

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EUROPEAN STANDARD

EN ISO 10139-1

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English version

## Dentistry - Soft lining materials for removable dentures - Part 1: Materials for short-term use (ISO 10139-1:2005)

Art dentaire - Produits souples pour intrados de prothèses  
dentaires amovibles - Partie 1: Produits pour usage à court  
terme (ISO 10139-1:2005)

Zahnheilkunde - Weichbleibende Unterfütterungswerkstoffe  
für Prothesen - Teil 1: Werkstoffe für kurzzeitige  
Anwendungen (ISO 10139-1:2005)

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

## **I.S. EN ISO 10139-1:2005**

### **EN ISO 10139-1:2005 (E)**

#### **Foreword**

This document (EN ISO 10139-1:2005) has been prepared by Technical Committee ISO/TC 106 "Dentistry" in collaboration with Technical Committee CEN/TC 55 "Dentistry", the secretariat of which is held by DIN.

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 August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document supersedes EN 30139-1:1994.

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

#### **Endorsement notice**

The text of ISO 10139-1:2005 has been approved by CEN as EN ISO 10139-1:2005 without any modifications.



I.S. EN ISO 10139-1:2005

# INTERNATIONAL STANDARD

**ISO**  
**10139-1**

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## Dentistry — Soft lining materials for removable dentures —

### Part 1: Materials for short-term use

*Art dentaire — Produits souples pour intrados de prothèses dentaires  
amovibles —*

*Partie 1: Produits pour usage à court terme*



Reference number  
ISO 10139-1:2005(E)

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# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Classification</b> .....	<b>1</b>
<b>4.1 Types</b> .....	<b>1</b>
<b>4.2 Classes</b> .....	<b>2</b>
<b>5 Requirements</b> .....	<b>2</b>
<b>5.1 Development of elastic recovery</b> .....	<b>2</b>
<b>5.2 Change in compliance with age as measured by depth of penetration</b> .....	<b>2</b>
<b>6 Sampling</b> .....	<b>3</b>
<b>7 Test methods</b> .....	<b>3</b>
<b>7.1 Ambient conditions for testing</b> .....	<b>3</b>
<b>7.2 Measurement of elastic recovery</b> .....	<b>3</b>
<b>7.3 Test of compliance as measured by depth of penetration</b> .....	<b>5</b>
<b>8 Requirement for labelling, marking and instructions supplied by the manufacturer</b> .....	<b>8</b>
<b>8.1 Packaging</b> .....	<b>8</b>
<b>8.2 Marking</b> .....	<b>8</b>
<b>8.3 Manufacturer's instructions for use</b> .....	<b>9</b>
<b>Bibliography</b> .....	<b>10</b>

## 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 10139-1 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthetic materials*.

This second edition cancels and replaces the first edition (ISO 10139-1:1991), which has been technically revised.

ISO 10139 consists of the following parts, under the general title *Dentistry — Soft lining materials for removable dentures*:

- *Part 1: Materials for short-term use*
- *Part 2: Materials for long-term use*

## Introduction

Clinically, short-term denture-lining materials are used commonly as tissue conditioners and as temporary soft lining materials. It is believed that their use as functional impression materials is now less common. Therefore, the tests are designed to cover the more common usages.

It is recognized that the short-term material, when used as a tissue conditioner, is commonly changed every few days with the aim of returning the mucosa to a healthy condition as quickly as possible. As a temporary soft lining, the material is commonly placed in immediate dentures and in dentures that need to be modified as part of implant treatment. Therefore the specification has been so designed to necessitate that a material exhibit the required properties over a 7-d period. It is of course recognized that there are a number of clinical situations where it is appropriate to retain the soft lining in the denture for periods longer than 7 d. It is also recognized that manufacturers may wish to provide more than one set of times, temperatures, proportions and procedures to mix or prepare the material properly in order that the material can satisfy the requirements of more than one type or class.

In its earliest stage, the soft lining material is usually removed from the mouth so that it can be adjusted and tidied. If the material attains a particular level of elastic recovery, removal from the mouth will not result in unacceptable distortion. Therefore, denture lining materials for short-term use are classified in this part of ISO 10139 according to the time at which 10 % elastic recovery is established. (When stating the time at which 10 % elastic recovery is established, the manufacturer is to take, as zero time, the end of mixing.)

The other classification is related to initial compliance.

Although it is not claimed that any particular time at which 10 % elastic recovery is attained or level of compliance is superior to another, these classifications are intended to assist clinicians who will now have more information with which to make an informed choice.

In an attempt to establish some degree of harmony with the procedures used to evaluate related dental materials, the displacement rheometer, which is used to measure the setting characteristics of elastomeric impression materials, has been adopted to measure elastic recovery of the short-term soft lining materials (ISO 4823:2000). This method supersedes the consistency test.

This part of ISO 10139 does not include specific qualitative and quantitative requirements for freedom from biological hazard. When possible biological or toxicological hazards need to be assessed, refer to ISO 7405 (see the Bibliography).

**I.S. EN ISO 10139-1:2005**

# Dentistry — Soft lining materials for removable dentures —

## Part 1: Materials for short-term use

### 1 Scope

This part of ISO 10139 specifies requirements for the physical properties, test methods, packaging, marking and manufacturer's instructions for denture lining materials suitable for short-term use.

### 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 3696, *Water for analytical laboratory use — Specification and test methods*

### 3 Terms and definitions

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

#### 3.1

##### **tissue conditioning material**

soft lining material, placed in the fitting surface of a denture, that is intended to be in contact with the denture-supporting mucosa, commonly for a period of up to 7 d, with the aim of assisting its return to a healthy condition

#### 3.2

##### **temporary soft lining material for dentures**

soft lining material for dentures that is intended to be used for a limited period to improve fit, retention and comfort

### 4 Classification

#### 4.1 Types

Materials for short-term use shall be classified into the following types according to development of elastic recovery (see 5.1) as determined in accordance with 7.2:

- Type A: allows short time before removal from the mouth (5 min or less than 5 min);
- Type B: allows extended time before removal from the mouth (more than 5 min).

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