SLOVENSKI STANDARD
SIST EN ISO 1561:2000

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Dental casting wax (ISO 1561:1995)

Dental casting wax (ISO 1561:1995)

Dentales Gußwachs (ISO 1561:1995)

Cires dentaires (ISO 1561:1995)

Ta slovenski standard je istoveten z: **EN ISO 1561:1997**

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English version

Dental casting wax (ISO 1561:1995)

Cires dentaires (ISO 1561:1995)

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This European Standard was approved by CEN on 9 November 1997.

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.

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

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

Foreword

The text of the International Standard from Technical Committee ISO/TC 106 "Dentistry" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 55 "Dentistry", the secretariat of which is held by DIN.

This European Standard replaces EN 21561:1992.

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of an identical text or by endorsement, at the latest by May 1998, and conflicting national standards shall be withdrawn at the latest by May 1998.

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.

Endorsement notice

The text of the International Standard ISO 1561:1995 has been approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

ISO 1561

Second edition
1995-10-15

Dental casting wax

Cires dentaires

Reference number
ISO 1561:1995(E)

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.

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.

International Standard ISO 1561 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthodontic materials*.

This second edition cancels and replaces the first edition (ISO 1561:1975), which has been technically revised.

Annex A of this International Standard is for information only.

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Dental casting wax

1 Scope

This international Standard specifies the classification of and requirements for dental casting wax, together with the test methods to be employed to determine compliance with these requirements.

This International Standard is applicable to dental casting wax used in making patterns in the production of fixed prostheses restorations by the "lost-wax" casting technique.

NOTE 1 Specific qualitative and quantitative requirements for freedom from biological hazard are not included in this International Standard. In assessing possible biological or toxicological hazards, reference should be made to ISO 10993-1 and ISO/TR 7405.

2 Definition

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

2.1 casting wax: Compound consisting essentially of natural waxes, resins and hydrocarbons of the paraffin and microcrystalline series.

3 Classification

Dental casting waxes are classified according to the flow characteristics that define their hardness as follows:

Type 1: Soft

Type 2: Hard

4 Requirements

4.1 Uniformity and purity

The wax shall be uniform and free from visible foreign materials.

4.2 Size and shape

The size and shape of the wax shall be as stated by the manufacturer.

4.3 Colour

The colour of the wax shall be as stated by the manufacturer.

4.4 Softening characteristics

The wax shall soften uniformly when heated, without becoming flaky. It shall not laminate when formed into a working mass.

4.5 Chipping

The wax shall not show appreciable chipping or flaking when trimmed to a fine margin at (23 ± 2) °C.

4.6 Flow behaviour

When tested in accordance with 6.2, the sample of the wax shall produce flow results complying with the requirements in table 1 for different types of wax at the three applicable test temperatures.

Table 1 — Wax flow behaviour (% change in specimen length)

Test temperatures	Type 1		Type 2	
	Minimum	Maximum	Minimum	Maximum
°C	%	%	%	%
30	—	1,0	—	—
37	—	—	—	1,0
40	50,0	—	—	20,0
45	70,0	90,0	70,0	90,0

4.7 Residue on ignition

The melted wax when ignited at 500 °C shall leave no residue in excess of 0,1 % of the original mass of the specimen, as tested in accordance with 6.3.

For wax having residue exceeding 0,1 % original mass at 500 °C ignition and designed for use with investments formulated for a burnout temperature higher than 700 °C, the manufacturer shall indicate on the label the amount of residue at 500 °C. When the wax is ignited at 500 °C, the residue shall be within 20 % of the manufacturer's stated value. Such wax shall not leave more than 0,1 % residue when ignited at 700 °C.

5 Sampling

The method of procurement and the amount of wax needed for testing shall be the subject of agreement between the interested parties.

6 Test methods

6.1 Visual inspection

Use visual inspection in determining compliance with the requirements as specified in 4.1 to 4.5 and in clause 7.

6.2 Evaluation of flow characteristics

6.2.1 Apparatus

6.2.1.1 Metric micrometer.

6.2.1.2 Flow-testing instrument (see figure 1), consisting of the following parts:

— a metallic cylinder (A);

— a shaft having low thermal conductivity (B);

— a brass plate (C);

— a measuring dial gauge (D) with scale graduated in 0,005 mm;

— a lock-nut screw (E).

The total mass of the components A, B, C and D shall be 2 kg. The cylinder (A) shall be separated a minimum distance of 76 mm from the brass plate (C) by the shaft (B). This shaft shall be of hard rubber, or a similarly poor thermal conductor, to reduce heat loss from the specimen. The diameter of the brass plate (C) shall be not less than 51 mm and thickness not greater than 6,35 mm.

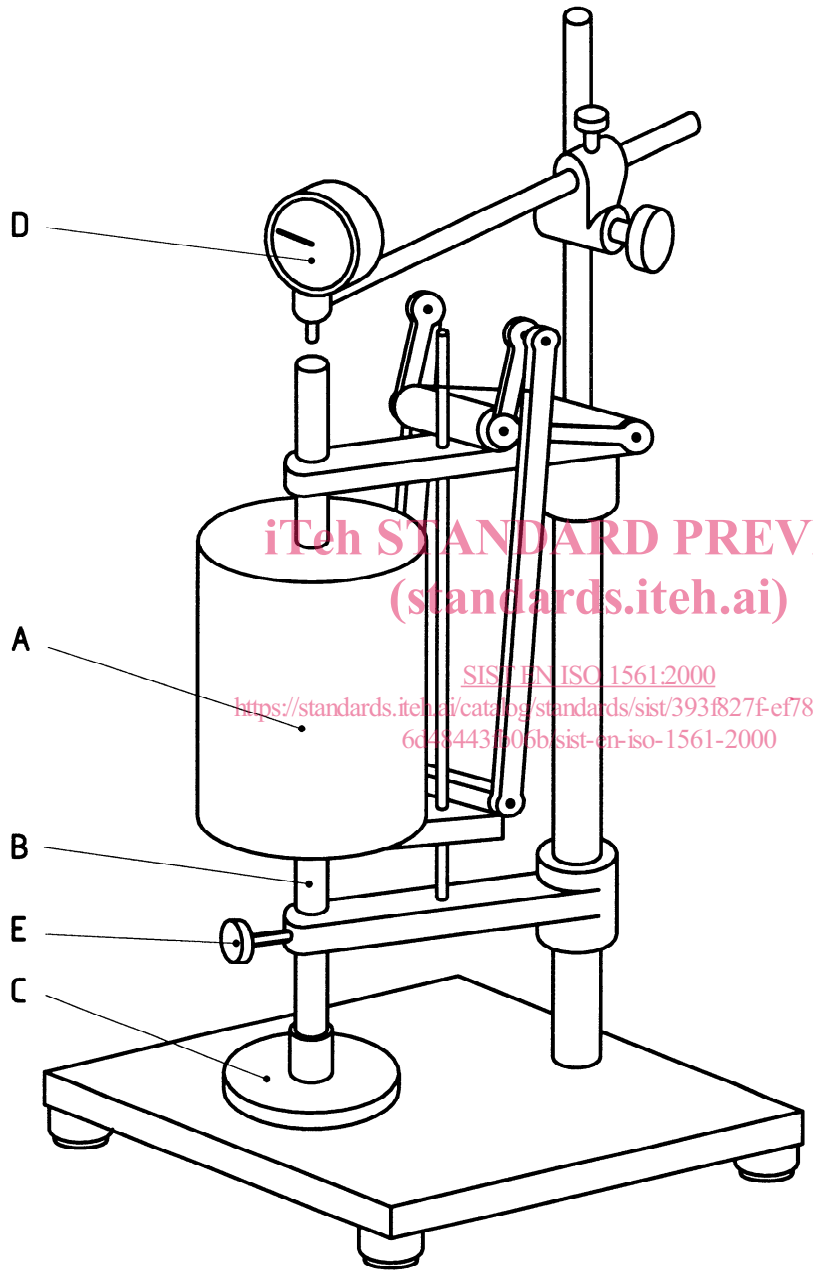
NOTE 2 If the flow-testing instrument is robust enough to support a measuring dial gauge and a lock-nut screw rigidly, or the instrument is built with them incorporated (see D and E in figure 1), then a measuring dial gauge accurate to 0,005 mm with a range of at least 10 mm may replace the micrometer for direct measurement.

6.2.1.3 Mould (see figure 2), consisting of a stainless steel plate 6 mm thick, having parallel flat top and bottom surfaces, and containing four holes each 10 mm in diameter. The axes of the holes shall be perpendicular to the surface of the plate. The sides of the holes shall be finished smooth.

6.2.1.4 Pouring pan (see figure 3), of metal or conventional porcelain, with handle.

6.2.1.5 Cellophane or polyethylene film.

6.2.1.6 Calibrated thermometer.



Key

A Weight

B Shaft

C Brass plate

D Gauge

E Lock-nut screw

Figure 1 — Flow-testing instrument