
**Dentistry — Casting and baseplate
waxes**

Médecine bucco-dentaire — Cires pour coulée et pour plaque de base



This document is a preview generated by EKO



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification	2
5 Requirements	2
5.1 Appearance	2
5.2 Flow	2
5.3 Behaviour on trimming	2
5.4 Behaviour on softening (Type 1)	2
5.5 Appearance after flaming (Type 2)	2
5.6 Behaviour on softening (Type 2)	3
5.7 Residue on artificial teeth (Type 2)	3
5.8 Behaviour of colouring material (Type 2)	3
5.9 Adhesion on storage (Type 2)	3
5.10 Residue on ignition (Type 1)	3
5.11 Biocompatibility	3
6 Sampling	3
7 Test methods — General	3
7.1 Ambient temperature	3
7.2 Apparatus function verification	4
8 Test methods — Specific	4
8.1 Visual inspection	4
8.2 Flow	4
8.2.1 Principle	4
8.2.2 Apparatus	4
8.2.3 Preparation of test pieces	8
8.2.4 Procedure	9
8.2.5 Expression of results and evaluation	10
8.3 Behaviour on trimming	10
8.3.1 Principle	10
8.3.2 Apparatus	10
8.3.3 Procedure	10
8.4 Behaviour on softening (Type 1)	10
8.4.1 Principle	10
8.4.2 Apparatus	11
8.4.3 Procedure	11
8.5 Appearance after flaming (Type 2)	11
8.5.1 Principle	11
8.5.2 Procedure	11
8.6 Behaviour on softening (Type 2)	11
8.6.1 Principle	11
8.6.2 Apparatus	11
8.6.3 Procedure	11
8.7 Residue on artificial teeth and behaviour of wax colouring material (Type 2)	12
8.7.1 Principle	12
8.7.2 Apparatus	12
8.7.3 Procedure	12
8.8 Adhesion on storage (Type 2)	13
8.8.1 Principle	13

8.8.2	Apparatus.....	13
8.8.3	Procedure.....	13
8.9	Residue on ignition (Type 1).....	14
8.9.1	Principle.....	14
8.9.2	Apparatus.....	14
8.9.3	Procedure.....	14
9	Marking and packaging.....	15
9.1	Marking.....	15
9.2	Packaging.....	15
10	Test report.....	15
Annex A (informative) Determination of the melting point of wax.....		17
Bibliography.....		19

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthetic materials*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 55, *Dentistry*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 15854:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the requirement for separating paper for baseplate wax sheets has been revised;
- the statement of the requirement for residue on ignition for casting wax has been revised;
- the mass of wax used for the residue on ignition test has been increased to 10 g;
- the use of a mandrel for the delamination test has been revised;
- clarification has been given on the procedural detail in most tests;
- specification of the content of the required report has been added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document does not include specific and quantitative requirements for freedom from biological hazards. It is recommended that, in assessing possible biological or toxicological hazards, reference be made to ISO 7405 and ISO 10993-1.

This document is a preview generated by EVS

Dentistry — Casting and baseplate waxes

1 Scope

This document specifies the classification of and requirements for dental casting and dental baseplate waxes together with the test methods to be employed to determine compliance with these requirements.

This document does not apply to waxes supplied for additive manufacturing or CAD/CAM-based procedures.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1942, *Dentistry — Vocabulary*

ISO 6873, *Dentistry — Gypsum products*

ISO 8601-1, *Date and time — Representations for information interchange — Part 1: Basic rules*

ISO 8601-2, *Date and time — Representations for information interchange — Part 2: Extensions*

ISO 22112, *Dentistry — Artificial teeth for dental prostheses*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

casting wax

mouldable material with minimal residue on ignition suitable primarily for shaping patterns in the production of cast restorations using the “lost-wax” technique

3.2

baseplate wax

mouldable material primarily for forming occlusion rims, positioning and retaining artificial teeth therein, and shaping patterns that are duplicated in the denture base polymer

3.3

melting point

temperature above which no solid material exists at equilibrium

Note 1 to entry: For the practical purposes of this document, the melting point and the freezing point shall be considered as being the same.