



# SLOVENSKI STANDARD SIST EN ISO 13078-2:2016

01-oktober-2016

---

**Zobozdravstvo - Dentalne peči - 2. del: Preskusna metoda za vrednotenje programa peči s stopnjo vžiga (ISO 13078-2:2016)**

Dentistry - Dental furnace - Part 2: Test method for evaluation of furnace programme via firing glaze (ISO 13078-2:2016)

Zahnheilkunde - Brennofen - Teil 2: Prüfverfahren für die Bewertung des Brennprogrammes durch den Brenngrad (ISO 13078-2:2016)

Médecine bucco-dentaire - Four dentaire - Partie 2: Méthode d'essai pour l'évaluation du programme de cuisson d'un four via une cuisson de glaçure (ISO 13078-2:2016)

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>

**Ta slovenski standard je istoveten z: EN ISO 13078-2:2016**

---

**ICS:**

11.060.25      Zobotehnični instrumenti      Dental instruments

**SIST EN ISO 13078-2:2016**      en

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 13078-2:2016](https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016)

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>

EUROPEAN STANDARD

EN ISO 13078-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2016

ICS 11.060.01

English Version

## Dentistry - Dental furnace - Part 2: Test method for evaluation of furnace programme via firing glaze (ISO 13078-2:2016)

Médecine bucco-dentaire - Four dentaire - Partie 2: Méthode d'essai pour l'évaluation du programme de cuisson d'un four via une cuisson de glaçure (ISO 13078-2:2016)

Zahnheilkunde - Brennofen - Teil 2: Prüfverfahren für die Bewertung des Brennprogrammes durch den Brenngrad (ISO 13078-2:2016)

This European Standard was approved by CEN on 9 August 2016.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 13078-2:2016](https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016)  
<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>

## European foreword

This document (EN ISO 13078-2:2016) 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 February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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

### **iTeh STANDARD PREVIEW**

**Endorsement notice**

The text of ISO 13078-2:2016 (standard.iteh.ai) has been approved by CEN as EN ISO 13078-2:2016 without any modification.

[SIST EN ISO 13078-2:2016](https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016)

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 13078-2:2016](https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016)

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>

INTERNATIONAL  
STANDARD

ISO  
13078-2

First edition  
2016-07-15

---

---

**Dentistry — Dental furnace —**  
**Part 2:**  
**Test method for evaluation of furnace**  
**programme via firing glaze**

*Médecine bucco-dentaire — Four dentaire —*

*Partie 2: Méthode d'essai pour l'évaluation des programmes des fours  
dentaires avec le degré de calcination*

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN ISO 13078-2:2016](https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016)

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>



Reference number  
ISO 13078-2:2016(E)

© ISO 2016

## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 13078-2:2016

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>



### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, 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  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org



# Contents

	Page
Foreword .....	iv
Introduction .....	v
<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 Test method .....</b>	<b>2</b>
4.1 Materials .....	2
4.2 Devices .....	3
4.3 Preparation of the test specimens .....	4
4.4 Firing .....	5
4.4.1 Implementation .....	5
4.4.2 Firing data of the dental ceramic manufacturer .....	6
4.5 Evaluation of the firing results .....	6
4.6 Correction .....	7
<b>5 Test report .....</b>	<b>8</b>
<b>Bibliography .....</b>	<b>9</b>

## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 13078-2:2016

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>

## ISO 13078-2:2016(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.

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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthetic dental materials*.

A list of all parts in the ISO 13078 series can be found on the ISO website.

## Introduction

Dental furnaces are suitable for the manufacturing of metal-ceramic and partly also all-ceramic restorations for use in dentistry. Dental furnaces are particularly used for firing or sintering, respectively, of dental opaques, dentine and enamel materials to the respective compatible substructure materials. According to the current state of the art, the temperature of this process lies between 600 °C and 1 000 °C.

The different calibration processes applied by the manufacturers of dental furnaces as well as the varying construction types of the dental furnaces currently on the market influence the firing result.

Despite the fact that different dental furnaces can have identical digital external displays, different results regarding the degree of firing can be identified when processing the same ceramics under otherwise similar conditions.

A different degree of firing not only causes differences that can be judged directly by the human eye (e.g. colour and transparency), but also deviations that cannot be detected by the eye. These are, for instance, the linear coefficient of thermal expansion, the bonding strength, the strength values and the acid solubility. Such changes may result in clinical failures (e.g. fractures) as well as changed aesthetics of the dental ceramic restoration.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 13078-2:2016](https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016)

<https://standards.iteh.ai/catalog/standards/sist/f01e8dd8-0b26-4367-9dba-95ab4d1bc84e/sist-en-iso-13078-2-2016>