



SLOVENSKI STANDARD SIST EN ISO 22052:2020

01-september-2020

Zobozdravstvo - Oprema za centralno pripravo stisnjenega zraka (ISO 22052:2020)

Dentistry - Central compressed air source equipment (ISO 22052:2020)

Zahnheilkunde - Zentrale Druckluftversorgungsanlage (ISO 22052:2020)

Médecine bucco-dentaire - Centrale d'air comprimé (ISO 22052:2020)

Ta slovenski standard je istoveten z: **EN ISO 22052:2020**

[SIST EN ISO 22052:2020](https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020)

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>

ICS:

11.060.20	Zobotehnična oprema	Dental equipment
-----------	---------------------	------------------

SIST EN ISO 22052:2020

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 22052:2020

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 22052

July 2020

ICS 11.060.20

English Version

Dentistry - Central compressed air source equipment (ISO 22052:2020)

Médecine bucco-dentaire - Centrale d'air comprimé
(ISO 22052:2020)

Zahnheilkunde - Zentrale Druckluftversorgungsanlage
(ISO 22052:2020)

This European Standard was approved by CEN on 23 May 2020.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 22052:2020
<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>

European foreword

This document (EN ISO 22052:2020) 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 January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 22052:2020 has been approved by CEN as EN ISO 22052:2020 without any modification.

[SIST EN ISO 22052:2020](https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020)

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 22052:2020

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>

INTERNATIONAL STANDARD

**ISO
22052**

First edition
2020-06

Dentistry — Central compressed air source equipment

Médecine bucco-dentaire — Centrale d'air comprimé

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 22052:2020](https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020)

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>



Reference number
ISO 22052:2020(E)

© ISO 2020

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 22052:2020

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

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	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Classification	4
5 Requirements	5
5.1 Electrical safety	5
5.2 Electromagnetic compatibility	5
5.3 Quality of dental air	5
5.4 Performance	6
5.4.1 Air delivery flow rate of central compressed air source equipment	6
5.4.2 Condensate drain	6
5.4.3 Bacterial filter	6
5.4.4 Sound level of central compressed air source equipment	6
5.5 Test report	6
6 Sampling	6
7 Measurement and test methods	7
7.1 Visual inspection	7
7.1.1 General	7
7.1.2 Visual inspection of equipment	7
7.1.3 Visual inspection of documentation	7
7.2 Equipment performance	7
7.2.1 General test conditions	7
7.2.2 Air delivery flow rate at the central compressed air source equipment connection point	7
7.2.3 Air treatment system performance	8
7.2.4 Sound generation	8
8 Information to be supplied by the manufacturer	8
8.1 General	8
8.2 Instructions for use	8
8.3 Technical description	9
8.4 Information about the central compressed air source equipment location	10
9 Marking	10
9.1 Marking on the central compressed air source equipment	10
9.2 Marking of controls	11
9.3 Graphical symbols	11
Annex A (informative) Example of design of central compressed air source equipment	12
Annex B (informative) Typical arrangements of central compressed air source equipment in the dental facility and recommendations for construction and installation	14
Annex C (informative) Suggested template for test report	21
Bibliography	23

ISO 22052:2020(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).

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 6, *Dental equipment*.

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-1d12b17c6640/iso-22052-2>

This first edition of ISO 22052 cancels and replaces ISO/TS 22595-2:2008.

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

Central compressed air source equipment is nearly universally present in modern dental treatment facilities. It consists of components located separate from treatment rooms used to compress air, prepare the air to meet quality requirements and to store the dental air for eventual use by treatment room pneumatic devices such as air powered hand pieces and air-water syringes as well as for cooling purposes.

Since the output of central compressed air source equipment is used in dental treatment, the equipment characteristics as well as the quality characteristics of the dental air becomes the subject of this document.

The requirements specified in this document have been developed with consideration for the dental air requirements specified in ISO 7494-2.

In medical applications the quality of “air for medical use” is carefully defined. For example, in the European Pharmacopeia and in other countries there are similar definitions. Air for medical use is used for artificial breathing, anaesthetic, endoscopic and other applications inside the human body, also for long term therapy. Also, it is used in sterile environments like operating rooms. For these applications it is necessary to have a precise definition of the quality of the air. The European Pharmacopeia gives values and limits for the contents of the air as well as limits for dangerous contaminants.

In dental applications, compressed air is used to supply driving power for treatment room pneumatic devices such as air powered hand pieces (“drills”) and for drying an operating site. Air used for these purposes intermittently enters a patient’s mouth and to a significant degree, can be quickly removed by dental suction equipment. As the ambient air in the dental treatment room is not sterile, there is no need for dental air to be sterile nor is there a need for the contents of dental air to be controlled beyond the requirements of normal ambient air.

Nevertheless, there are some essential quality characteristics for the air used in dentistry:

- a) to protect sensitive dental instruments and apparatus (from oil, water, particles);
- b) to provide clean and dry air and to avoid that dental procedures are compromised (because oil is a release agent that affects e.g. dental adhesion systems);
- c) to protect against high humidity in the dental air that creates corrosion in the air receivers and air lines and that can result in technical difficulties in dental instruments; also to protect against the growth of microorganisms in the dental air system.

The test method in this document has been developed in response to the need for clear specification in determining the quality of the dental air.

Up to now, there is no international standard available which defines the quality of “air for dental use”.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 22052:2020

<https://standards.iteh.ai/catalog/standards/sist/2382553c-48b3-4fb6-b788-ffc12bda7e66/sist-en-iso-22052-2020>