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)

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EUROPEAN STANDARD

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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)

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

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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of an identical text or by endorsement, at the latest by January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.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.

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INTERNATIONAL STANDARD

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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).

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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*.

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".