SLOVENSKI STANDARD
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Zobozdravstvo - Centralna sukcijska (aspiracijska) oprema (ISO/DIS 10637:2017)

Dentistry - Central suction source equipment (ISO/DIS 10637:2017)

Zahnheilkunde - Zentrale Absauganlage (ISO/DIS 10637:2017)

Médecine bucco-dentaire - Systèmes d'aspiration centrale (ISO/DIS 10637:2017)

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Dentistry — Central suction source equipment

Médecine bucco-dentaire — Systèmes d'aspiration centrale

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Contents

Page

Foreword ..... **iv**

Introduction ..... **v**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Classification **3**
  4.1 Classification according to separation of solids and liquids from air flow 3
  4.2 Classification according to air flow rate 3
  4.3 Reference conditions (air flow rates) 3

5 Requirements **4**
  5.1 Characterization of central suction source equipment flow rate performance 4
  5.2 Maximum suction pressure 4
  5.3 Safety requirements 4
  5.4 EMC 4
  5.5 Other requirements as applicable 4
    5.5.1 General 4
    5.5.2 Amalgam separator 4
    5.5.3 Bacterial filter 5

6 Sampling **5**

7 Measurement and test methods **5**
  7.1 General 5
    7.1.1 General provisions for tests 5
    7.1.2 Atmospheric conditions 5
    7.1.3 Other conditions 5
  7.2 Performance tests 5
    7.2.1 Measurement of flow rate performance 5
    7.2.2 Measurement of maximum suction source 6
    7.2.3 Measures to prevent excessive static suction at the suction machine connection point 6
  7.3 Bacterial filters 6

8 Information to be supplied by the manufacturer **6**
  8.1 General 6
  8.2 Instructions for use 6
  8.3 Technical description 7

9 Marking **8**
  9.1 Marking on outside of electrically operated central suction source equipment 8
  9.2 Exhaust pipeline connection point 8

10 Packaging **8**

Annex A (informative) **Dry suction system source equipment diagram** **9**

Annex B (informative) **Semi-dry suction system source equipment diagram** **10**

Annex C (informative) **Wet suction system source equipment diagram** **11**

Annex D (informative) **Suction systems diagram** **12**

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 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.

The committee responsible for this document is ISO/TC 106, *Dentistry*, Subcommittee SC 6, *Dental equipment.*

This second edition cancels and replaces the first edition (ISO 10637:1999), which has been technically revised. The following changes were made:

a) Clarification of scope;

b) Classification according to the air flow rate (Type 1, Type 2 or Type 3) was added;

c) Measurement and test methods was added;

d) Diagrams for different suction source equipment were added in the Annexes.

Introduction

Dental suction systems evacuate solids, liquids, aerosols and gases from the oral cavity and immediate surrounding area for the purpose of improving operating effectiveness and efficiency during oral treatment procedures and limiting the contamination of the immediate environment. In central suction systems the equipment that generates suction and performs other supporting functions is located in a central location outside of the dental treatment room to isolate this equipment from the immediate vicinity of patient treatment and often to provide suction to multiple treatment rooms.

A central suction system consists of four basic elements:

1 dental treatment room suction components (e.g. dental unit suction system),

2 facility suction pipeline,

3 central suction source equipment and

4 exhaust pipeline.

The central suction source equipment consists of all the components from the facility suction pipeline connection point (i.e. discharge end of the facility suction pipeline) to the exhaust pipeline connection point (i.e. inlet to the exhaust pipeline). In addition to the equipment that generates air flow, centrally located amalgam separators and air water separators (if present) are also component parts of the central suction source equipment.

This document specifies requirements for central suction source equipment only. This includes central suction source equipment used for scavenging patient exhaled nitrous oxide and oxygen.

Dentistry — Central suction source equipment

1 Scope

This document specifies requirements and test methods for stationary, electrically powered central suction source equipment. It also specifies requirements for information to be supplied by the manufacturer on the performance, installation, operation and maintenance of the central suction source equipment as part of the complete dental suction system.

This document specifies requirements for central suction source equipment used to provide vacuum pressure and flow at the facility pipeline connection point.

This document does not apply to portable suction source equipment, air/water venturi suction source equipment, or to suction source equipment located in the treatment room. It also does not apply to suction source equipment used for life support or for scavenging halogenated anaesthetic gases.

This document does not include requirements for facility and exhaust piping systems or treatment room equipment.

Centrally located amalgam separators and air water separators are both component parts of the central suction source equipment.

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 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 1: General principles and requirements*

ISO 7494-2, *Dentistry — Dental units — Part 2: Air, water, suction and wastewater systems*

ISO 9687, *Dentistry — Graphical symbols for dental equipment*

ISO 11143, *Dentistry — Amalgam separators*

ISO 29463-1:2011, *High-efficiency filters and filter media for removing particles in air — Part 1: Classification, performance testing and marking*

IEC 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 7494-2 and the following apply.

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

— IEC Electropedia: available at http://www.electropedia.de

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
air separator
apparatus which separates liquids and solids from the suction system air flow

3.2
cannula connector
component at the inlet end of the dental suction operating hose, which joins the cannula to the operating hose

3.3
central suction source equipment
components located between the facility suction pipeline connection point and the exhaust pipeline connection point which, when activated creates reduced air pressure capable of inducing an air flow at the facility suction pipeline connection point

3.4
central suction system
assembly of equipment, including dental treatment room suction equipment, facility suction pipeline, central suction source equipment and exhaust pipeline which can induce an air flow to evacuate solids, liquids, aerosols and gases from the oral cavity and immediate surrounding area during oral treatment procedures

3.5
dental unit suction system
all the dental suction system components that are part of the dental unit

Note 1 to entry: When a dental unit suction system is an element of a central dental suction system, it extends from the atmospheric inlet to the dental unit suction source connection point (i.e. the connection to the facility suction pipeline).

3.6
exhaust pipeline
grouping of pipes and fittings used to carry the air and other gases with entrained substances discharged by the central suction source equipment

3.7
exhaust pipeline connection point
port on the central suction source equipment for connection to the exhaust pipeline

3.8
facility suction pipeline
grouping of pipes and fittings that connect the dental unit suction system to the central suction source equipment

3.9
facility suction pipeline connection point
location within the central suction source equipment where connection is made to the facility suction pipeline

3.10
suction machine
central suction source equipment component that produces pressure lower than atmospheric

EXAMPLE Pump, side channel blower.

3.11
suction system air flow
movement of air along a pipeline induced by a pressure difference