



SLOVENSKI STANDARD
oSIST prEN ISO 5467-2:2022

01-februar-2022

**Zobozdravstvo - Mobilne zobozdravstvene enote in stoli za paciente - 2. del:
Sistemi za dovod zraka in vode, za sukcijsko (aspiracijsko) in odvod odpadne vode
(ISO/DIS 5467-2:2021)**

Dentistry - Mobile dental units and dental patient chairs - Part 2: Air, water, suction and wastewater systems (ISO/DIS 5467-2:2021)

Zahnheilkunde - Mobile Behandlungseinheiten und Patientenliegen - Teil 2: Luft, Wasser, Absaugung und Abwasser (ISO/DIS 5467-2:2021)

Médecine bucco-dentaire - Units dentaires et fauteuils dentaires patient mobiles - Partie 2: Systèmes d'alimentation en air et en eau, d'aspiration et d'évacuation des eaux usées (ISO/DIS 5467-2:2021)

Ta slovenski standard je istoveten z: prEN ISO 5467-2

ICS:

11.060.20 Zobotehnična oprema Dental equipment

oSIST prEN ISO 5467-2:2022

en,fr,de

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

[oSIST prEN ISO 5467-2:2022](https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022)

<https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022>

DRAFT INTERNATIONAL STANDARD

ISO/DIS 5467-2

ISO/TC 106/SC 6

Secretariat: DIN

Voting begins on:
2021-12-01

Voting terminates on:
2022-02-23

Dentistry — Mobile dental units and dental patient chairs —

Part 2:

Air, water, suction and wastewater systems

ICS: 11.060.20

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

[oSIST prEN ISO 5467-2:2022](https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022)

<https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022>

This document is circulated as received from the committee secretariat.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

ISO/CEN PARALLEL PROCESSING



Reference number
ISO/DIS 5467-2:2021(E)

© ISO 2021

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

[oSIST prEN ISO 5467-2:2022](https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022)

<https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022>



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 Connections from the mobile dental unit to dental handpiece.....	2
5.2 Supply connections to the mobile dental unit.....	2
5.3 Water and wastewater systems.....	2
5.3.1 Incoming water.....	2
5.3.2 Materials used for construction of procedural water systems within the mobile dental unit.....	3
5.3.3 Backflow prevention device for mobile dental units connected to the external drinking water supply.....	3
5.3.4 Cuspidors.....	3
5.3.5 Water venturi.....	3
5.3.6 Particle filter.....	3
5.3.7 Bacterial filter.....	3
5.3.8 Bottled water system supplying procedural water or solution.....	4
5.3.9 Retraction.....	4
5.3.10 Treatment method for biofilm.....	4
5.3.11 Water sampling connection point.....	4
5.3.12 Wastewater drain connection.....	4
5.4 Air system.....	4
5.4.1 Incoming dental air.....	4
5.4.2 Particle filters.....	4
5.4.3 Bacterial filters.....	4
5.4.4 Condensate drain.....	5
5.4.5 Compressed air filter.....	5
5.5 Mobile dental unit suction systems.....	5
5.5.1 Maximum suction pressure.....	5
5.5.2 Suction pressure head loss.....	5
5.5.3 Configuration of cannula connectors and cannula.....	5
5.5.4 Operating hoses with cannula connectors.....	5
5.5.5 Solids filter.....	5
5.5.6 Air separator.....	5
5.5.7 Mobile dental unit suction source connection point.....	5
5.5.8 Suction flow rate.....	6
5.5.9 Bacterial filter.....	6
5.6 Test report.....	6
6 Sampling.....	6
7 Measurement and test methods.....	6
7.1 Visual inspection.....	6
7.1.1 Visual inspection of equipment.....	6
7.1.2 Visual inspection of documentation or test reports.....	6
7.2 Dental handpiece connection test.....	6
7.2.1 Apparatus.....	6
7.2.2 Procedure.....	7
7.3 Systems directly connected to external drinking water supply test.....	9
7.4 Cuspidor test.....	9
7.5 Particle filters test.....	9

ISO/DIS 5467-2:2021(E)

7.6	Retraction test.....	9
7.7	Mobile dental unit suction systems test.....	10
7.7.1	Static suction pressure test.....	10
7.7.2	Suction pressure head loss test.....	11
7.8	Suction flow rate test.....	12
8	Instructions for use.....	12
9	Technical description.....	13
Annex A (informative) Test report.....		15
Bibliography.....		21

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

[oSIST prEN ISO 5467-2:2022](https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022)

<https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022>

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*.

This first edition was developed in consideration of ISO 7494-2:20XX to be applicable to mobile dental units.

A list of all parts in the ISO 5467 series can be found on the ISO website.

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 specifies requirements and test methods pertaining to components of mobile dental units which convey air, water, suction, and wastewater. The requirements in this document focus on certain technical aspects to be appropriate for international standardization. The working group acknowledges that requirements for microbiological aspects of the fluids transported by mobile dental units are also worthy of standardization and is working to develop requirements pertaining to the prevention, inhibition, and removal of mobile dental unit waterline biofilm. Additional projects to develop microbiological requirements for air, water, and/or suction may follow.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[oSIST prEN ISO 5467-2:2022](https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022)

<https://standards.iteh.ai/catalog/standards/sist/ab19c70c-30dc-40f9-867f-7e8b5a43e4b9/osist-pren-iso-5467-2-2022>

Dentistry — Mobile dental units and dental patient chairs —

Part 2: Air, water, suction and wastewater systems

1 Scope

This document specifies requirements and test methods of mobile dental units concerning

- a) the properties of mobile dental unit connections to the compressed air supply, water supply, suction supply, and wastewater drain plumbing,
- b) the materials, design, and construction of the compressed air and water system within the mobile dental unit,
- c) the quality for incoming water and air,
- d) the performance of mobile dental unit suction system, and
- e) the air, water, suction and wastewater properties of mobile dental unit connections to the interfaces to dental handpieces.

This document also specifies requirements for instructions for use and technical description.

This document is limited to mobile dental units that are not used for oral surgery treatment requiring sterile air and water supplies. Amalgam separators are not included in this document.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 5467-1, *Mobile dental units and dental patient chairs — Part 1: General requirements*

ISO 7494-2:20XX, *Dentistry — Stationary dental units and dental patient chairs — Part 2: Air, water, suction and wastewater systems*

ISO 8573-1, *Compressed air — Part 1: Contaminants and purity classes*

ISO 9168, *Dentistry — Hose connectors for air driven dental handpieces*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 5467-1, ISO 7494-2, ISO 10637, ISO 22052 and the following apply.

ISO/DIS 5467-2:2021(E)

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 <https://www.electropedia.org/>

3.1 mobile dental unit suction system
 components located between the facility suction pipeline connection point and the cannula connector that are part of the mobile dental unit which enable an air flow to be induced which is designed to remove spray, liquids, and solids from the mouth of the dental patient during dental treatment

Note 1 to entry: Suction source equipment may be included in mobile dental unit, in which case no facility suction pipeline connection point exists.

3.2 mobile dental unit suction source connection point
 any port on the mobile dental unit for connection to a supply of dental suction

4 Classification

Clause 4 of ISO 7494-2:20XX applies.

5 Requirements

5.1 Connections from the mobile dental unit to dental handpiece

The requirements specified in 5.1 of ISO 7494-2:20XX applies by replacing stationary dental unit with mobile dental unit.

Test in accordance with [7.1](#).

5.2 Supply connections to the mobile dental unit

Technical description shall include the configuration of the supply connections for the mobile dental unit, if applicable.

NOTE Some mobile dental units do not have any supply connection other than an electrical power supply cable.

The location of other utility connections which are not indicated shall be specified by the manufacturer.

Test in accordance with [7.1](#).

5.3 Water and wastewater systems

5.3.1 Incoming water

Instructions for use and technical description shall specify the requirements for the incoming water either to be supplied to the mobile dental unit or for the bottled water to be used in the mobile dental unit, or both, including the following parameters:

- a) water pressure limits, if applicable;
- b) water flow rate limit, if applicable;
- c) water hardness limit;
- d) pH limits;

e) maximum particle size;

NOTE The following ranges are typical ranges:

- a) water pressure limits (2 bar to 6 bar);
- b) water flow rate limit (greater than 5 l/min);
- c) water hardness limit [less than 2,14 mmol/l (<12 °dH)];
- d) pH limits (6,5 to 8,5);
- e) maximum particle size (<100 µm);

Test in accordance with [7.1](#).

5.3.2 Materials used for construction of procedural water systems within the mobile dental unit

The requirements specified in 5.3.3 of ISO 7494-2:20XX applies by replacing stationary dental unit with mobile dental unit.

Test in accordance with [7.1](#).

5.3.3 Backflow prevention device for mobile dental units connected to the external drinking water supply

The requirements specified in 5.3.4 of ISO 7494-2:20XX applies by replacing stationary dental unit with mobile dental unit.

Test in accordance with [7.3](#).

5.3.4 Cuspidors

If the mobile dental unit provides a cuspidor, the requirements specified in 5.3.5 of ISO 7494-2:20XX applies.

Test in accordance with [7.4](#).

5.3.5 Water venturi

If the mobile dental unit provides water venturi for suction of saliva and wastewater, the requirements specified in 5.3.6 of ISO 7494-2:20XX applies.

Test in accordance with [7.1](#).

5.3.6 Particle filter

The requirements specified in 5.3.7 of ISO 7494-2:20XX applies by replacing stationary dental unit with mobile dental unit.

Test in accordance with [7.5](#).

5.3.7 Bacterial filter

The requirements specified in 5.3.8 of ISO 7494-2:20XX applies by replacing stationary dental unit with mobile dental unit.

Test in accordance with [7.1](#).