

This is a preview of "ISO 7494-2:2015". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2015-04-01

Dentistry — Dental units —

Part 2:

Air, water, suction and wastewater systems

Médecine bucco-dentaire — Units dentaires —

Partie 2: Systèmes d'alimentation en air et en eau, d'aspiration et d'évacuation des eaux usées



Reference number
ISO 7494-2:2015(E)

© ISO 2015

This is a preview of "ISO 7494-2:2015". Click [here](#) to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015

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
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 7494-2:2015". Click here to purchase the full version from the ANSI store.

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Classification	4
4.1 Classification of suction systems.....	4
4.2 Classification of suction air volume flow rate.....	4
5 Requirements	4
5.1 Requirements for supply connections.....	4
5.2 Requirements for water and wastewater systems.....	4
5.2.1 Incoming water.....	5
5.2.2 Materials used for construction of procedural water systems within the dental unit.....	6
5.2.3 Backflow prevention device for dental units connected to the external drinking water supply.....	7
5.2.4 Cuspidors.....	7
5.2.5 Water venturi.....	7
5.2.6 Particle filter.....	7
5.2.7 Bacterial filter.....	7
5.2.8 Bottled water system supplying procedural water or solution.....	7
5.2.9 Retraction.....	7
5.2.10 Water disinfection systems.....	7
5.2.11 Water sampling connection point.....	8
5.2.12 Wastewater drain connection.....	8
5.3 Requirements for the air system.....	8
5.3.1 Incoming air (dental air).....	8
5.3.2 Particle filters.....	8
5.3.3 Bacterial filters.....	9
5.4 Requirements for dental unit suction systems.....	9
5.4.1 Static vacuum pressure.....	9
5.4.2 Head loss.....	9
5.4.3 Air separators.....	9
5.4.4 Cannula connectors and cannula.....	9
5.4.5 Operating hoses with cannula connectors.....	10
5.4.6 Solids filter.....	11
5.4.7 Noise level.....	11
5.4.8 Dental unit suction source connection point.....	11
6 Sampling	11
7 Tests	11
7.1 Cuspidors.....	11
7.2 Water venturi.....	11
7.3 Systems directly connected to external drinking water supply.....	11
7.4 Bottled water system supplying procedural water or solution.....	11
7.5 Retraction.....	12
7.6 Particle filters.....	12
7.7 Bacterial filters.....	12
7.8 Water disinfection systems.....	12
7.9 Tests for dental unit suction systems.....	13
7.9.1 Static vacuum pressure test.....	13
7.9.2 Head loss test.....	13
7.9.3 Measurement of noise level.....	14

This is a preview of "ISO 7494-2:2015". [Click here to purchase the full version from the ANSI store.](#)

7.10	Water sampling connection point.....	15
7.11	Incoming water and air quality.....	15
7.12	Supply connections.....	15
8	Manufacturer's instructions for use.....	15
9	Technical description.....	16
Annex A (informative)	Schematic diagram of possible components and connections in a dental unit.....	18
Annex B (informative)	Test sequences.....	20
Bibliography		25

This is a preview of "ISO 7494-2:2015". Click here to purchase the full version from the ANSI store.

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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

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

This edition of ISO 7494-2 cancels and replaces ISO 7494-2:2003 and ISO 11144, of which it constitutes a technical revision, while only replacing certain requirements specific to dental units given in ISO 10637. In addition, it consolidates and updates requirements formerly specified in

- ISO 10637:1999, *Dental equipment — High- and medium-volume suction systems*, and
- ISO 11144:1995, *Dental equipment — Connections for supply and waste lines*.

ISO 7494 consists of the following parts, under the general title *Dentistry — Dental units*:

- *Part 1: General requirements and test methods*
- *Part 2: Air, water, suction and wastewater systems*

This is a preview of "ISO 7494-2:2015". [Click here to purchase the full version from the ANSI store.](#)

Introduction

This part of ISO 7494 specifies requirements and test methods pertaining to components of the dental unit which convey air, water, suction, and wastewater. The requirements in this part of ISO 7494 focus on certain technical aspects regarded by the working group to be appropriate for international standardization. The working group acknowledges that requirements for microbiological aspects of the fluids transported by dental units are also worthy of standardization and is working to develop requirements pertaining to the prevention, inhibition, and removal of dental unit waterline biofilm. Additional projects to develop microbiological requirements for air, water, and/or suction may follow.