
**Dentistry — Manual toothbrushes —
General requirements and test methods**

*Médecine bucco-dentaire — Broses à dents manuelles — Exigences
générales et méthodes d'essai*



This document is a preview generated by EVS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing 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

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	3
4.1 Pass-fail criteria	3
4.2 Physical inspection	3
4.3 Tuft retention	3
4.4 Fatigue resistance	3
4.5 Chemical challenge	3
4.6 Handle impact strength	3
5 Test method	3
5.1 Sampling	3
5.2 General test conditions	3
5.3 Physical inspection	3
5.4 Tuft-retention test	4
5.5 Fatigue resistance test	5
5.6 Resistance to chemical challenge	6
5.7 Handle impact test	6
6 Test report	9
7 Marking and labelling	10
8 Packaging	10
Bibliography	11

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 20126 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 7, *Oral care products*.

This second edition cancels and replaces the first edition (ISO 20126:2005), which has been technically revised.

The significant difference between this second edition and the first edition is:

- a requirement (4.6) and a test (5.7) for handle impact resistance have been added.

Introduction

Manual toothbrushes are used for the removal of dental plaque and oral debris in order to facilitate oral hygiene. This International Standard is intended to determine the physical properties of manual toothbrushes, including impact resistance.

Specific qualitative and quantitative requirements for freedom from biological hazards are not included in this International Standard. It is recommended that, in assessing possible biological hazards, reference be made to ISO 7405 and ISO 10993-1.

Dentistry — Manual toothbrushes — General requirements and test methods

1 Scope

This International Standard specifies requirements and test methods for the physical properties of manual toothbrushes in order to promote the safety of these products for their intended use.

This International Standard does not apply to manual interdental brushes and powered oral hygiene devices, as these instruments are covered by separate International Standards.

2 Normative references

The following referenced documents are indispensable for the application 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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 22254, *Dentistry — Manual toothbrushes — Resistance of tufted portion to deflection*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942 and ISO 22254 and the following apply.

3.1

manual toothbrush

hand-powered device, the working end of which carries filaments primarily for cleaning surfaces within the oral cavity

NOTE Adapted from ISO 22254:2005, definition 3.1.

3.2

brush head

working end of a manual toothbrush to which the filaments are attached

NOTE Adapted from ISO 22254:2005, definition 3.2.

3.3

filament

single strand within the brush head

[ISO 22254:2005, definition 3.3]

3.4

tuft

group of filaments gathered together and attached to the brush head

[ISO 22254:2005, definition 3.4]

3.5

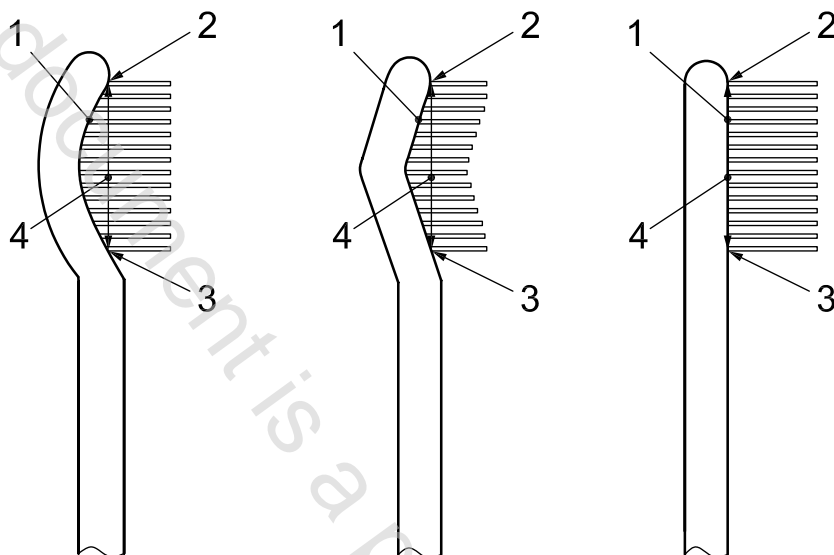
tuft-removal force

force required to remove one tuft from the brush head

3.6
tuft-hole plane
 plane between the bases of the tufts (where they meet the tuft-hole surface) at the top of the brush head and at the base of the tufts at the bottom of the brush head

See Figure 1.

NOTE Adapted from ISO 22254:2005, definition 3.6.



Key

- 1 tuft-hole surface
- 2 top of brush head
- 3 bottom of brush head
- 4 tuft-hole plane

Figure 1 — Tuft-hole plane

3.7
period of oscillation of the pendulum
 T_p
 period, expressed in seconds, of a single complete oscillation (to and fro) of the pendulum, oscillating at angles of oscillation of less than 5° to each side of the vertical

[ISO 13802:1999, definition 3.3]

3.8
centre of percussion
 point on pendulum at which a perpendicular impact in the plane of swing does not cause reaction forces at the axis of rotation of the pendulum

[ISO 13802:1999, definition 3.4]

3.9
pendulum length
 L_p
 distance, expressed in metres, between the axis of rotation of the pendulum and the **centre of percussion** (3.8), equal to an equivalent theoretical pendulum mass concentrated at the point which gives the same **period of oscillation**, T_p (3.7), as the actual pendulum

NOTE Adapted from ISO 13802:1999, definition 3.5.