TECHNICAL ISO/TR

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Dental materials — Guidance on testing of wear —

Part 1: Wear by toothbrushing

Produits dentaires — Recommandations relatives aux essais de résistance à l'usure —

Partie 1: Usure par brossage des dents

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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

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Foreword

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ISO/TR 14569-1 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthodontic materials*.

This first edition cancels and replaces ISO/TS 14569-1:1999, which has been technically revised.

ISO/TR 14569 consists of the following parts, under the general title *Dental materials — Guidance on testing of wear*:

— *Part 1: Wear by toothbrushing*

— *Part 2: Wear by two- and/or three body contact*

Introduction

It is well understood that the wear mechanisms in the mouth are very complex. In addition they may differ from one individual to another. Therefore it appears impossible to reproduce these varying conditions in a single wear test.

As a consequence, many wear tests have been proposed in dental science. Most of them consider mainly one specific aspect of the different mechanisms, and some of them even claim to be able to characterize the wear resistance of dental materials completely. However, these procedures are not really comparable because of the different wear mechanisms considered, and the lack of a generally accepted test method.

It therefore makes sense to utilize laboratory tests, investigating the various wear aspects arising separately under clinical conditions. They may determine wear, only for the clinical situation in which the same wear mechanism dominates; but it might be possible to predict the complete clinical wear by a number of different test methods.

In this part of ISO/TR 14569, wear by tooth brushing is considered. This is one aspect of the wear problem and may only be important for materials exposed to tooth brushing, such as materials used on labial surfaces.

The intention of this part of ISO/TR 14569 is to define conditions for the various existing laboratory tests so that they can deliver comparable results and can be used for at least a screening of different materials.