
**Wear of implant materials — Polymer and
metal wear particles — Isolation and
characterization**

*Usure des matériaux d'implant — Particules d'usure des polymères et
des métaux — Isolation et caractérisation*



Reference number
ISO 17853:2011(E)

© ISO 2011

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2011

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 Terms and definitions	1
3 Principle, reagents and apparatus	1
3.1 Principle	1
3.2 Reagents	2
3.3 Apparatus	2
4 Methods of sampling and analysis of polymer and metal wear particles from tissue samples	3
4.1 Storage and preparation of samples	3
4.2 Procedure for polymer particle isolation	4
4.3 Procedure for metal particle isolation	5
4.4 Collection of particles	6
4.5 Particle size and shape characterization	7
4.6 Particle identification	8
5 Methods of sampling and analysis of polymer and metal particles from joint simulator lubricants	9
5.1 General	9
5.2 Procedure for polymer materials — For example UHMWPE and polyetheretherketone (PEEK)	9
5.3 Procedure for metal particles	10
5.4 Procedure for ceramic particles	13
6 Test report	13
Bibliography	15