INTERNATIONAL STANDARD

ISO 5832-3

Fourth edition 2016-10-15

Implants for surgery — Metallic materials —

Part 3:

Wrought titanium 6-aluminium 4-vanadium alloy

Implants chirurgicaux — Produits à base de métaux — Partie 3: Alliage corroyé à base de titane, d'aluminium-6 et de vanadium-4



Reference number ISO 5832-3:2016(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

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 Ch. de Blandonnet 8 • CP 401 CH-1214 Vernier, Geneva, Switzerland Tel. +41 22 749 01 11 Fax +41 22 749 09 47 copyright@iso.org www.iso.org

Con	tents	Page
Forew	vord	iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Chemical composition	1
5	Microstructure	2
6	Mechanical properties	2
	6.1 Tensile	2
	6.2 Bending	
7	Test methods	3
Annex	x A (normative) Catalogues of metallographic micrographs of typical alpha+beta titanium microstructures	4
Anne	x B (informative) Mechanical Properties Harmonization between ISO and ASTM wrought titanium 6-aluminium 4-vanadium Implant Material Standards	5
Biblio	ography	7

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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 150, *Implants for surgery,* Subcommittee SC 1, *Materials.*

This fourth edition cancels and replaces the third edition (ISO 5832-3:1996), which has been technically revised.

ISO 5832 consists of the following parts, under the general title *Implants for surgery — Metallic materials:*

- Part 1: Wrought stainless steel
- Part 2: Unalloyed titanium
- Part 3: Wrought titanium 6-aluminium 4-vanadium alloy
- Part 4: Cobalt-chromium-molybdenum casting alloy
- Part 5: Wrought cobalt-chromium-tungsten-nickel alloy
- Part 6: Wrought cobalt-nickel-chromium-molybdenum alloy
- Part 7: Forgeable and cold-formed cobalt-chromium-nickel-molybdenum-iron alloy
- Part 8: Wrought cobalt-nickel-chromium-molybdenum-tungsten-iron alloy
- Part 9: Wrought high nitrogen stainless steel
- Part 11: Wrought titanium 6-aluminium 7-niobium alloy
- Part 12: Wrought cobalt-chromium-molybdenum alloy
- Part 14: Wrought titanium 15-molybdenum 5-zirconium 3-aluminium alloy