

INTERNATIONAL  
STANDARD

ISO/ASTM  
52303

First edition  
2015-07-15

---

---

**Guide for absorbed-dose mapping in ra-  
diation processing facilities**

*Guide pour la cartographie de dose absorbée du rayonnement  
des installations de traitement*



Reference number  
ISO/ASTM 52303:2015(E)

© ISO/ASTM International 2015

## ISO/ASTM 52303:2015(E)

© ISO/ASTM International 2015

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. In the United States, such requests should be sent to ASTM International.

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

ASTM International, 100 Barr Harbor Drive, PO Box C700,  
West Conshohocken, PA 19428-2959, USA  
Tel. +610 832 9634  
Fax +610 832 9635  
E-mail [khooper@astm.org](mailto:khooper@astm.org)  
Web [www.astm.org](http://www.astm.org)

Published in Switzerland

## Contents

	Page
1 Scope .....	1
2 Referenced Documents .....	1
3 Terminology .....	2
4 Significance and use .....	2
5 Prerequisites .....	3
6 Dose mapping .....	3
7 Analysis of dose map data .....	6
8 Measurement uncertainty .....	6
9 Documentation accumulation .....	6
10 Keywords .....	7
<b>Figure 1</b> An Example of a Dosimeter Placement Array in a Three-Dimensional Grid Pattern for an Operational Qualification Dose Mapping .....	4
<b>Table X1.1</b> Summary dose measurements and analysis .....	9
<b>Table X1.1</b> Summary dose measurements and analysis ( <i>continued</i> ) .....	10

## ISO/ASTM 52303:2015(E)

### 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.

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.

ASTM International is one of the world's largest voluntary standards development organizations with global participation from affected stakeholders. ASTM technical committees follow rigorous due process balloting procedures.

A project between ISO and ASTM International has been formed to develop and maintain a group of ISO/ASTM radiation processing dosimetry standards. Under this project, ASTM Committee E61, Radiation Processing, is responsible for the development and maintenance of these dosimetry standards with unrestricted participation and input from appropriate ISO member bodies.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. Neither ISO nor ASTM International shall be held responsible for identifying any or all such patent rights.

International Standard ISO/ASTM 52303 was developed by ASTM Committee E61, Radiation Processing, through Subcommittee E61.03, Dosimetry Application, and by Technical Committee ISO/TC 85, Nuclear energy, nuclear technologies and radiological protection.

This first edition cancels and replaces ASTM E2303-11, which has been technically revised.