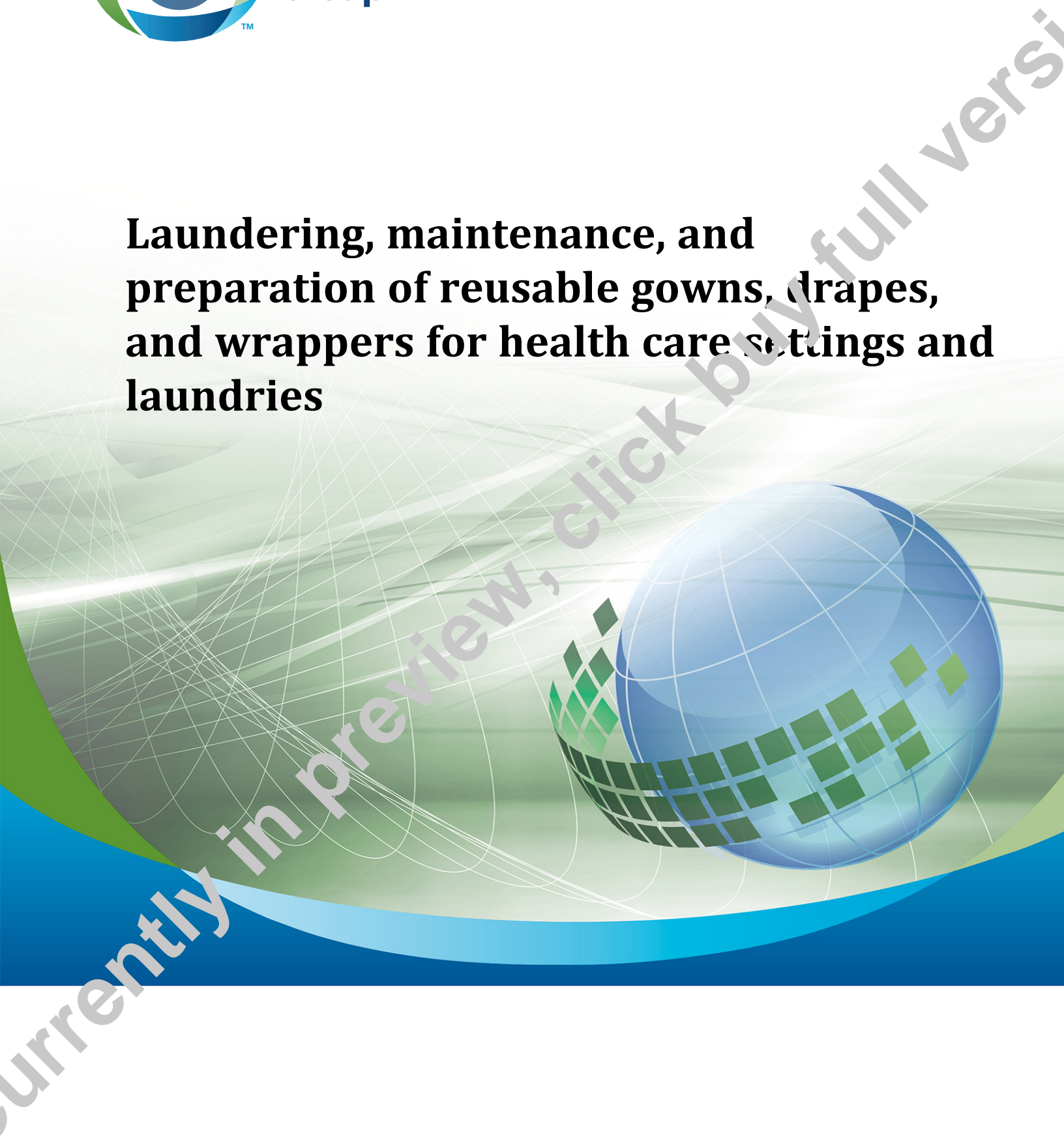




**CSA
Group**

Z314.10.2-15

**Laundering, maintenance, and
preparation of reusable gowns, drapes,
and wrappers for health care settings and
laundries**



Legal Notice for Standards

Canadian Standards Association (operating as “CSA Group”) develops standards through a consensus standards development process approved by the Standards Council of Canada. This process brings together volunteers representing varied viewpoints and interests to achieve consensus and develop a standard. Although CSA Group administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate, or verify the content of standards.

Disclaimer and exclusion of liability

This document is provided without any representations, warranties, or conditions of any kind, express or implied, including, without limitation, implied warranties or conditions concerning this document’s fitness for a particular purpose or use, its merchantability, or its non-infringement of any third party’s intellectual property rights. CSA Group does not warrant the accuracy, completeness, or currency of any of the information published in this document. CSA Group makes no representations or warranties regarding this document’s compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL CSA GROUP, ITS VOLUNTEERS, MEMBERS, SUBSIDIARIES, OR AFFILIATED COMPANIES, OR THEIR EMPLOYEES, DIRECTORS, OR OFFICERS, BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWSOEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSSESSION OR USE OF THIS DOCUMENT, EVEN IF CSA GROUP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, CSA Group is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of experience to use and apply its contents, and CSA Group accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

CSA Group is a private not-for-profit company that publishes voluntary standards and related documents. CSA Group has no power, nor does it undertake, to enforce compliance with the contents of the standards or other documents it publishes.

Intellectual property rights and ownership

As between CSA Group and the users of this document (whether it be in printed or electronic form), CSA Group is the owner, or the authorized licensee, of all works contained herein that are protected by copyright, all trade-marks (except as otherwise noted to the contrary), and all inventions and trade secrets that may be contained in this document, whether or not such inventions and trade secrets are protected by patents and applications for patents. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect CSA Group’s and/or others’ intellectual property and may give rise to a right in CSA Group and/or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by treaty or by law, CSA Group reserves all intellectual property rights in this document.

Patent rights

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. CSA Group shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

Authorized use of this document

This document is being provided by CSA Group for informational and non-commercial use only. The user of this document is authorized to do only the following:

If this document is in electronic form:

- load this document onto a computer for the sole purpose of reviewing it;
- search and browse this document; and
- print this document if it is in PDF form.

Limited copies of this document in print or paper form may be distributed only to persons who are authorized by CSA Group to have such copies, and only if this Legal Notice appears on each such copy.

In addition, users may not and may not permit others to

- alter this document in any way, or remove this Legal Notice from the attached standard;
- sell this document without authorization from CSA Group; or
- make an electronic copy of this document.

If you do not agree with any of the terms and conditions contained in this Legal Notice, you may not load or use this document or make any copies of the contents hereof, and if you do make such copies, you are required to destroy them immediately. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.



Standards Update Service

Z314.10.2-15

August 2015

Title: *Laundering, maintenance, and preparation of reusable gowns, drapes, and wrappers for health care settings and laundries*

To register for e-mail notification about any updates to this publication

- go to shop.csa.ca
- click on **CSA Update Service**

The **List ID** that you will need to register for updates to this publication is **123 85**.

If you require assistance, please e-mail techsupport@csagroup.org or call 416-747-2233.

Visit CSA Group's policy on privacy at www.csagroup.org/legal to find out how we protect your personal information.

Z314.10.2-15

***Laundering, maintenance, and
preparation of reusable gowns,
drapes, and wrappers for health
care settings and laundries***



™A trade-mark of the Canadian Standards Association, operating as "CSA Group"

*Published in August 2015 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3*

*To purchase standards and related publications, visit our Online Store at shop.csa.ca
or call toll-free 1-800-463-6727 or 416-747-4044.*

ISBN 978-1-4883-0031-8

© 2015 CSA Group

*All rights reserved. No part of this publication may be reproduced in any form whatsoever
without the prior permission of the publisher.*

Contents

Technical Committee on Sterilization	3
Subcommittee on Packaging	7
Preface	10
0 Introduction	11
1 Scope	11
2 Reference publications	12
3 Definitions	14
4 General requirements	16
5 Personnel	16
5.1 General	16
5.2 Qualifications	16
5.2.1 Supervisory personnel	16
5.2.2 Laundry personnel	16
5.2.3 Sharps and other medical devices	17
6 Work areas and equipment	17
6.1 Area design	17
6.2 Requirements for specific areas	18
6.2.1 Soiled sort area	18
6.2.2 Wash floor area	18
6.2.3 Surgical textile inspection area/booth/assembly area	18
6.2.4 Clean and sterile storage areas	18
6.2.5 Chemical storage areas	18
6.3 Cleaning of laundry areas	19
6.4 Equipment	19
6.5 Water quality and temperature	21
7 Prevention of stains and other damage to reusable textiles	21
8 Maintenance	22
8.1 General	22
8.2 Inspection	23
8.2.1 General	23
8.2.2 Stains	24
8.2.3 Holes and other defects	25
8.2.4 Patches	25
8.2.5 Repairs	26
8.3 Stain removal and repairs	26
8.3.1 Stain removal	26

8.3.2 Barrier treatments 26

9 Handling, transport, receiving, and storage of soiled textiles 27

9.1 General 27

9.2 Safety of personnel 27

9.3 Containment and handling of soiled textiles at the point of use 28

9.3.1 General 28

9.3.2 Initial handling and containment 28

9.4 Containers, carts, and delivery vehicles 29

9.4.1 Containers 29

9.4.2 Delivery vehicles (off-site transport) 30

9.5 Transport 31

9.5.1 General 31

9.5.2 Scheduling and routing 31

10 Laundering 31

10.1 General 31

10.2 Process development 32

10.2.1 General 32

10.2.2 Sorting and preparation for laundering 32

10.2.3 Loading 33

10.2.4 Washing 33

10.3 Drying 35

10.4 Process monitoring and management 35

10.4.1 Water 35

10.4.2 Chemicals 36

10.4.3 Pump delivery system 36

10.4.4 Textiles 36

10.4.5 Equipment operation 36

10.4.6 Evaluation of laundry processes 36

11 Folding and packaging of packs, gowns, and drapes 37

11.1 Procedures 37

11.2 Folding 37

11.2.1 General 37

11.2.2 Gowns 38

11.2.3 Drapes 38

12 Handling, transport, and storage of clean textiles 38

12.1 General 38

12.2 Handling 38

12.3 Transport 39

Annex A (informative) — Guidance for the design of laundering and laundry areas 42

Annex B (informative) — Evaluation criteria for laundries 46

Annex C (informative) — Suggested methods for preparing and folding packs, gowns, and drapes 48

Annex D (informative) — Operating Room (OR) Soiled Laundry Process Flow Chart 53

Technical Committee on Sterilization

I. Pequegnat	STERIS Canada Inc, Mississauga, Ontario <i>Category: Producer Interest</i>	<i>Chair</i>
G. Schultz	Winnipeg Regional Health Authority, Winnipeg, Manitoba <i>Category: User Interest</i>	<i>Vice-Chair</i>
N. Aelick	Health Sciences North / Horizon Santé-Nord, Sudbury, Ontario	<i>Association</i>
R.C. Bauer	3M Canada Company 3M HealthCare, London, Ontario <i>Category: Producer Interest</i>	
B. Bolding	Consultant, Burnaby, British Columbia <i>Category: General Interest</i>	
D. Bosnjak	Hamilton Health Sciences, Hamilton, Ontario <i>Category: User Interest</i>	
L. Buist	Interior Health Authority, Kelowna, British Columbia <i>Category: User Interest</i>	
L. Coutoulas	Southlake Regional Health Centre, Newmarket, Ontario <i>Category: User Interest</i>	
R. De Medeiros	Getinge Canada Limited, Mississauga, Ontario <i>Category: Producer Interest</i>	
M. Desrosiers	Public Health Ontario-Regional, Orillia, Ontario <i>Category: Government and/or Regulatory Authority</i>	
S. Dufresne	TSO3 Inc, Québec, Québec <i>Category: Producer Interest</i>	

C. Hancock	Charles O. Hancock Associates, Inc., Fairport, New York, USA <i>Category: General Interest</i>	
P.M. Haney	Keir Surgical Ltd., Vancouver, British Columbia <i>Category: Producer Interest</i>	
S. Jacka	Alberta Health, Edmonton, Alberta <i>Category: Government and/or Regulatory Authority</i>	
L. Jakeman	L Jakeman Consulting, West Porters Lake, Nova Scotia <i>Category: General Interest</i>	
M. Kanlic	St Joseph's Healthcare - Charlton Campus, Hamilton, Ontario	<i>Associate</i>
R. Khotar	Providence Health Care, Vancouver, British Columbia <i>Category: User Interest</i>	
L. Kingsbury	Consultant, Vancouver, British Columbia <i>Category: General Interest</i>	
C. Landers	Weeneebayko Area Health Authority, Moose Factory, Ontario <i>Category: General Interest</i>	
N. Mazurat	University of Manitoba College of Dentistry, Winnipeg, Manitoba	<i>Associate</i>
P.J. McCormick	Bausch & Lomb Incorporated, Rochester, New York, USA	<i>Associate</i>
S. Merritt	Toronto Western Hospital University Health Network, Toronto, Ontario <i>Category: User Interest</i>	
D. Moore	Regional Infection Control Network Mississauga- Halton, Brampton, Ontario	<i>Associate</i>

R. Nightingale	K-Bro Linen Systems Inc, Toronto, Ontario <i>Category: User Interest</i>	
L. O'Neil	Public Health Agency of Canada, Ottawa, Ontario <i>Category: Government and/or Regulatory Authority</i>	
R.D. Parker	Stryker Corporation, Kalamazoo, Michigan, USA	<i>Associate</i>
M. Patenaude	Johnson & Johnson Medical Companies, Gatineau, Québec <i>Category: Producer Interest</i>	
A. Pelletier	Institut National de Santé Publique du Québec, Montréal, Québec <i>Category: Government and/or Regulatory Authority</i>	
D. Pinsonneault	Jewish General Hospital, Montréal, Québec <i>Category: User Interest</i>	
A. Poirier	Horizon Health Network, Fredericton, New Brunswick	<i>Associate</i>
P. Quinn	Saskatoon Health Region, Saskatoon, Saskatchewan <i>Category: User Interest</i>	
A.M. Rancourt	McGill University Health Centre, Montréal, Québec <i>Category: User Interest</i>	
M.N. Smith	Getinge Sourcing LLC, Rochester, New York, USA	<i>Associate</i>
S. Springthorpe	University of Ottawa, Ottawa, Ontario <i>Category: General Interest</i>	
J. Starrord	Government of New Brunswick Department of Health, Fredericton, New Brunswick <i>Category: Government and/or Regulatory Authority</i>	

M. Steele-Rodway	Eastern Health Medical Device Reprocessing Serv, Mount Pearl, Newfoundland and Labrador <i>Category: User Interest</i>	
K.G. Stitz	MEDEC, Toronto, Ontario	<i>Associate</i>
A. Sun	SciCan Ltd., Toronto, Ontario	<i>Associate</i>
D. Trudeau	Providence Health Care, Vancouver, British Columbia <i>Category: User Interest</i>	
C. Williamson	Alberta Health Services, Edmonton, Alberta	<i>Associate</i>
S.M. Wilson	Alberta Health Services, Edmonton, Alberta	<i>Associate</i>
C. Cortisoz	CSA Group, Toronto, Ontario	<i>Project Manager</i>

Subcommittee on Packaging

P. Quinn	Saskatoon Health Region, Saskatoon, Saskatchewan	<i>Chair</i>
J. Daly Johnson	BeaconConverters, Inc., Saddle Brook, New York, USA	<i>Vice-Chair</i>
N. Aelick	Health Sciences North / Horizon Santé-Nord, Sudbury, Ontario	
B. Bolding	Consultant, Burnaby, British Columbia	
D. Bosnjak	Hamilton Health Sciences, Hamilton, Ontario	
L. Buist	Interior Health Authority, Kelowna, British Columbia	
B.J. Bushman	Standard Textile Co. Ltd, Cincinnati, Ohio, USA	
L. Coutoulas	Southlake Regional Health Centre, Newmarket, Ontario	
P.M. Haney	Keir Surgical Ltd., Vancouver, British Columbia	
L. Jakeman	L Jakeman Consulting, West Porters Lake, Nova Scotia	
D.W. Johnson	Halyard Health, Alpharetta, Georgia, USA	
M. Kanlic	St Joseph's Healthcare - Charlton Campus, Hamilton, Ontario	
R. Khotar	Providence Health Care, Vancouver, British Columbia	
C. Landers	Weeneebayko Area Health Authority, Moose Factory, Ontario	

G. Lankin	Lac-Mac Limited, London, Ontario
N. Mazurat	University of Manitoba College of Dentistry, Winnipeg, Manitoba
M. Middaugh	Cardinal Health, Waukegan, Illinois, USA
L. Murphy	L. Murphy Consulting, Furry Creek, British Columbia
K.P. Murray	Medline Canada Corporation, Oakville, Ontario
P. Nichol	Medline Industries, Inc, Waukegan, Illinois, USA
R. Nightingale	K-Bro Linen Systems Inc, Toronto, Ontario
B. O'Neill	London Hospital Linen Service Inc., London, Ontario
R.D. Parker	Stryker Corporation, Kalamazoo, Michigan, USA
M. Patenaude	Johnson & Johnson Medical Companies, Gatineau, Québec
I. Pequegnat	STERIS Canada Inc, Mississauga, Ontario
A.M. Rancourt	McGill University Health Centre, Montréal, Québec
J. Rasmussen	William Osler Health Centre Brampton Memorial Hospital Campus, Brampton, Ontario
A. Schnitker	Miele Limited, Vaughan, Ontario

M.H. Scholla	DuPont Protection Technologies, Wilmington, Delaware, USA	
G. Schultz	Winnipeg Regional Health Authority, Winnipeg, Manitoba	
M.N. Smith	Getinge Sourcing LLC, Rochester, New York, USA	
J.M. Spear	Aesculap, Westminster, Maryland, USA	
S. Stacey	Trudell Medical Marketing Ltd., London, Ontario	
M. Steele-Rodway	Eastern Health Medical Device Reprocessing Serv, Mount Pearl, Newfoundland and Labrador	
M.B. Walsh	Medline Industries Inc, Mundelein, Illinois, USA	
C. Williamson	Alberta Health Services, Edmonton, Alberta	
M. Zambrano	Trillium Health Partners Mississauga Hospital, Mississauga, Ontario	
C. Cortisoz	CSA Group, Toronto, Ontario	<i>Project Manager</i>

Preface

This is the second edition of CSA Z314.10.2, *Laundering, maintenance, and preparation of reusable gowns, drapes, and wrappers in health care settings*. It replaces the previous edition published in 2010. It is one of the CSA Z314 series of Standards dealing with decontamination, disinfection, and sterilization.

This Standard has been revised to work in tandem with applicable requirements of CSA Z314.0, *Medical device reprocessing – General requirements*, CSA Z314.10.1, *Selection and use of gowns and drapes intended for use in health care settings*, and other standards in the CSA Z314 series.

CSA group would like to acknowledge the contributions of Andrée Pelletier, Johanne Dionne, Diane Pinsonnault, and Anne Marie Rancourt towards the development of this Standard.

This Standard was prepared by the Subcommittee on Packaging, under the jurisdiction of the Technical Committee on Sterilization and the Strategic Steering Committee on Health Care Technology, and has been formally approved by the Technical Committee.

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
- 3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
- 4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include “Request for interpretation” in the subject line:*
 - a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
 - b) *provide an explanation of circumstances surrounding the actual field condition; and*
 - c) *where possible, phrase the request in such a way that a specific “yes” or “no” answer will address the issue.*
- 5) *Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are available on the Current Standards Activities page at standardsactivities.csa.ca.*
- 6) *This Standard is subject to review five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include “Proposal for change” in the subject line:*
 - a) *Standard designation (number);*
 - b) *relevant clause, table, and/or figure number;*
 - c) *wording of the proposed change;*
 - d) *rationale for change.*

Z314.10.2-15

Laundering, maintenance, and preparation of reusable gowns, drapes, and wrappers for health care settings and laundries

0 Introduction

Reusable gowns, drapes, and wrappers are important elements of infection prevention and control programs within health care settings. The safety of patients and staff depends on the correct choice of products for each purpose, and on the maintenance of the products' protective qualities through proper use and care. Misuse or improper laundering can significantly decrease the protective qualities of gowns, drapes, and wrappers, thereby increasing the risk posed to patients and staff, as well as increasing costs.

This Standard specifies requirements for the maintenance and laundering of reusable gowns, drapes, and wrappers, and provides this information for health care settings and their laundries, whether in-house or outsourced. It is intended to ensure the safety and serviceability of surgical gowns, isolation gowns, drapes, and wrappers, and to promote safe infection prevention and control practices for the protection of patients and health care personnel. It might also be useful to health care settings that need to evaluate the capabilities of facilities offering contract services connected with the laundering of reusable gowns, drapes, and wrappers.

This Standard is intended to be used with CSA Z314.10.1, CSA Z314.14, and relevant aspects of CSA Z314.0 and other applicable standards in the CSA Z314 series.

1 Scope

1.1

This Standard defines essential elements in the maintenance, laundering, and preparation of reusable gowns, drapes, and wrappers in health care settings and laundry services.

1.2

This Standard specifies requirements for

- a) the health care setting's and laundry service's care of reusable gowns, drapes, and wrappers;
- b) occupational health and safety for staff members involved in reusable laundering;
- c) physical requirements for laundering areas;
Note: Users should also refer to CSA Z314.0.
- d) maintenance and repairs of laundering equipment;
- e) handling, transportation, and storage of soiled and laundered textiles;
- f) laundering;
- g) process monitoring and process management (testing); and
- h) emergency planning.

1.3

This Standard does not cover

- a) the selection and use of gowns and drapes (see CSA Z314.10.1);
- b) the selection and use of wrappers (see CSA Z314.14);
- c) sterilization (see CSA Z314.3 and CSA Z314.23); and
- d) the laundry of reusable medical devices other than gowns, drapes, and wrappers (see CSA Z314.0, CSA Z314.3, CSA Z314.8, CSA Z314.14, and CSA Z314.23).

1.4

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

1.5

The values given in SI units are the units of record for the purposes of this Standard. The values given in parentheses are for information and comparison only.

2 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below:

CSA Group

Z314.0-13

Medical device reprocessing: General requirements

Z314.3-14

Effective sterilization in health care settings by the steam process

Z314.8-14

Decontamination of reusable medical devices

Z314.10.1-15

Selection and use of gowns, drapes, and wrappers in health care settings

Z314.14-15

Selection and use of packaging (sterile barrier systems) in health care settings