

Australian/New Zealand Standard™

Safety in laboratories

Part 2: Chemical aspects



AS/NZS 2243.2:2006

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CH-026, Safety in Laboratories. It was approved on behalf of the Council of Standards Australia on 2 June 2006 and on behalf of the Council of Standards New Zealand on 16 June 2006.

This Standard was published on 30 June 2006.

The following are represented on Committee CH-026:

Australian Industry Group
Australian Institute of Occupational Hygienists
CSIRO
Department of Labour, New Zealand
Department of Primary Industries (Victoria)
Environmental Science and Research, New Zealand
Ministry of Economic Development, New Zealand
National Association of Testing Authorities, Australia
National Measurement Institute, Australia
The New Zealand Chemical Industry Council
RMIT University
New Zealand Microbiological Society
Royal Australian Chemical Institute
Victorian WorkCover Authority
WorkCover New South Wales

Additional Interests:

Independent OHS and chemical management consultant
Monash University
University of Western Australia

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 05420.

AS/NZS 2243.2:2006

Australian/New Zealand Standard™

Safety in laboratories

Part 2: Chemical aspects

Originated in Australia as AS 2243.2—1979.
Previous edition AS/NZS 2243.2:1997.
Fifth edition 2006.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 7586 1

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CH-026, Safety in Laboratories, to supersede AS/NZS 2243.2:1997.

The objective of this Standard is to provide information, recommendations and procedures involving the use of chemicals which will promote safe working in laboratories.

This edition has been completely reformatted to improve clarity and to incorporate changed information on staff responsibilities, laboratory waste storage and disposal, and compressed and liquefied gases.

The Standard is Part 2 of a 10-part series designed to promote safety in laboratory operations, and is aimed at specific aspects of safety common to chemical laboratories.

The other Parts in the series are as follows:

- Part 1: Planning and operational aspects
- Part 3: Microbiological aspects and containment facilities
- Part 4: Ionizing radiations
- Part 5: Non-ionizing radiations—Electromagnetic, sound and ultrasound
- Part 6: Mechanical aspects
- Part 7: Electrical aspects
- Part 8: Fume cupboards
- Part 9: Recirculating fume cabinets
- Part 10: Storage of chemicals

It is recommended that Part 1 be used in conjunction with this Part, and that additional Parts be obtained where justified by the type of operations carried out in the particular laboratory.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	4
1.2 APPLICATION	4
1.3 REFERENCED AND RELATED DOCUMENTS	4
1.4 DEFINITIONS	4
SECTION 2 PLANNING FOR CHEMICAL SAFETY	6
SECTION 3 CHEMICAL SAFETY MANAGEMENT	
3.1 GENERAL	7
3.2 MANAGEMENT SYSTEM COMPONENTS	7
3.3 CHEMICAL SAFETY PRACTICES	10
3.4 SPILL MANAGEMENT	12
3.5 FIRE, EMERGENCY AND RESCUE PROCEDURES	14
SECTION 4 SAFE USE OF CHEMICAL SUBSTANCES	
4.1 GENERAL	15
4.2 CHEMICAL HAZARDS	15
4.3 GASES	15
4.4 FLAMMABLE CHEMICALS	17
4.5 TOXIC (POISONOUS) CHEMICALS	20
4.6 CORROSIVE SUBSTANCES	21
4.7 UNSTABLE CHEMICALS	21
4.8 HIGHLY REACTIVE CHEMICALS	21
APPENDICES	
A LIST OF REFERENCED AND RELATED DOCUMENTS	23
B LABEL FOR CHEMICAL WASTES	27
C THE USE OF ABSORBENT MATERIALS AND SPILL KITS	28
D HANDLING OF CRYOGENIC FLUIDS	29
E EXAMPLES OF COMMONLY USED HIGHLY FLAMMABLE CHEMICALS	36
F HAZARDOUS PROPERTIES ASSOCIATED WITH COMMONLY USED HIGHLY REACTIVE CHEMICALS	37
G HAZARDOUS PROPERTIES ASSOCIATED WITH COMMONLY USED TOXIC CHEMICALS	39
H HAZARDOUS PROPERTIES ASSOCIATED WITH COMMONLY USED CORROSIVE SUBSTANCES	41
I HAZARDOUS PROPERTIES ASSOCIATED WITH COMMONLY USED UNSTABLE SUBSTANCES	43
J HAZARDS ASSOCIATED WITH THE USE OF PERCHLORIC ACID	45

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-