

Australian Standard[®]

**Laboratory glassware—
Measuring cylinders**

[Based on ISO 4788:1980, Laboratory glassware; Graduated measuring cylinders]

This Australian Standard was prepared by Committee CH/1, Laboratory Glassware and Related Apparatus. It was approved on behalf of the Council of Standards Australia on 24 February 1995 and published on 5 July 1995.

The following interests are represented on Committee CH/1:

Australian Chamber of Commerce and Industry
Australian Government Analytical Laboratories
National Association of Testing Authorities, Australia
National Standard Commission
N.S.W. Agriculture
Royal Australian Chemical Institute
Royal College of Pathologists of Australasia
Scientific Suppliers Association of Australia
University of Sydney

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

Australian Standard[®]

**Laboratory glassware—
Measuring cylinders**

PREFACE

This Standard was prepared by the Standards Australia Committee CH/1 on Laboratory Glassware and Related Apparatus to supersede the 1978 edition of AS 2163, *Graduated measuring cylinders*.

The objective of this Standard is to provide a specification for graduated measuring cylinders required for general use in laboratories.

This revision considers only those measuring cylinders considered as Class B in the 1978 edition of the Standard and the specified dimensions also conform with ISO 4788—1980, *Laboratory glassware—Graduated measuring cylinders*.

CONTENTS

| | <i>Page</i> |
|---|-------------|
| 1 SCOPE | 3 |
| 2 REFERENCED DOCUMENT | 3 |
| 3 DEFINITION | 3 |
| 4 BASIS OF ADJUSTMENT | 3 |
| 5 CLASS OF ACCURACY | 3 |
| 6 TYPES | 3 |
| 7 NOMINAL CAPACITIES AND TOLERANCES ON CAPACITIES | 3 |
| 8 CONSTRUCTION | 3 |
| 9 GRADUATION AND NUMBERING | 5 |
| 10 MARKING | 6 |

Originated as AS R6—1947 (endorsement of BS 604—1935 with amendments).
Previous edition AS 2163—1978.
Second edition 1995.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

STANDARDS AUSTRALIA

Australian Standard

Laboratory glassware—Measuring cylinders

1 SCOPE This Standard sets out requirements for unstoppered and stoppered measuring cylinders suitable for general laboratory purposes.

2 REFERENCED DOCUMENT The following document is referred to in this Standard:

ISO

384 Laboratory glassware—Principles of design and construction of volumetric glassware

3 DEFINITION For the purpose of this Standard the definition below applies.

3.1 Capacity—the capacity corresponding to any graduation line is the volume of water at 20°C, expressed in millilitres, contained by the cylinder at 20°C when filled to that graduation line.

4 BASIS OF ADJUSTMENT

4.1 Unit of volume The unit of volume shall be the cubic centimetre (cm³), for which the name millilitre (mL) may be used.

NOTE: The term millilitre (mL) is commonly used as a special name for cubic centimetre (cm³), in accordance with the International System of Units (SI).

4.2 Reference temperature The standard reference temperature, i.e. the temperature at which the cylinder is intended to contain its nominal volume (nominal capacity), shall be 20°C.

5 CLASS OF ACCURACY One class of accuracy only is specified, the accuracy being lower than that associated with items of volumetric glassware intended for analytical use.

6 TYPES Cylinders shall be provided either with a pouring spout (see Figure 1), or with a ground neck (see Figure 2) and a suitably fitting stopper.

7 NOMINAL CAPACITIES AND TOLERANCES ON CAPACITIES

7.1 Nominal capacities Measuring cylinders shall have cylinders with the nominal capacities listed in Table 1.

7.2 Tolerances on capacities The tolerances on the capacities of measuring cylinders shall be as given in Table 1.

8 CONSTRUCTION

8.1 Material The cylinder should be made of clear glass, and shall be well annealed and as free as possible from striae and other visible defects. Amber or other coloured glass may be used for special purposes.