AS 1952—1986

Australian Standard®

DISPENSING MEASURES—PHARMACEUTICAL—GLASS

This Australian standard was prepared by Committee CH/1, Laboratory Glassware and Related Apparatus. It was approved on behalf of the Council of the Standards Association of Australia on 23 June 1986 and published on 5 September 1986.

The following interests are represented on Committee CH/1:

Chambers of Commerce, NSW, Vic.
Commonwealth Scientific and Industrial Research Organization
Commonwealth Serum Laboratories
Confederation of Australian Industry
Department of Agriculture, NSW
Department of Health (Commonwealth)
Department of Science and Technology
Government Chemical Laboratories, WA
National Standards Commission
Railways of Australia Committee
Royal Australian Chemical Institute
University of Sydney

Representatives of the following interests also participated in the drafting of this Australian standard:

Pharmacy Guild of Australia, NSW Branch
Society of Hospital Pharmacists of Australia

This standard was issued in draft form for comment as DR 84126.

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First published (AS R23 as endorsed with amendment of BS 1922:1953) 1959
AS 1952 first published 1976
Second edition 1980
Third edition 1986

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140
ISBN 0 7262 4307 8

PREFACE

This standard was prepared by the Association's Committee on Laboratory Glassware and Related Apparatus at the request of the Pharmacy Guild of Australia because it was believed that the sole Australian supplier of measures conforming to the previous edition of the standard had ceased production and no overseas manufacturer made measures to the specifications of that standard. As the various Australian statutory authorities require all registered pharmacists to carry a set of specified pharmaceutical measures at their premises, there was an urgent need to review the standard and make it possible to implement the statutory requirements which cited this Australian standard.

The modifications incorporated in this standard were proposed by the National Standards Commission in consultation with the Pharmacy Board of Victoria and were designed to broaden the structure of AS 1952 without surrendering the vital requirements pertaining to accuracy of calibration and ease of reading. A survey of the proposed changes was conducted with the state pharmaceutical authorities of Australia and all agreed with the proposals as contained in this document. The changes will permit a greater cross-section of products to meet the practical requirements of pharmaceutical use and, at the same time, reduce the cost of such items.

Additional changes pertaining to the checking of performance claims have also been included, and although such additions somewhat lengthen the standard, the tests are relatively simple and ensure that the products do indeed comply with what are considered to be basic requirements for their end-use. Allowance has also been made for the incorporation of the StandardsMark which will further ensure at a glance, that measures so marked comply with the requirements of this standard.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
DISPENSING MEASURES—PHARMACEUTICAL—GLASS

1 SCOPE. This standard specifies essential requirements for glass conical dispensing measures of capacities 5, 10, 20, 50, 100 and 200 mL and glass beaker dispensing measures of capacities 500 and 1000 mL for pharmaceutical purposes.

2 APPLICATION. This standard is applicable to measures primarily used by the pharmaceutical chemist in the marketplace although it does take into account measures that may be subjected to high temperature cleaning and sterilization in hospitals.

3 REFERENCED DOCUMENTS. The following documents are referred to in this standard:

AS 1199	Sampling Procedures and Tables for Inspection by Attributes
AS 1399	Guide to AS 1199, Sampling Procedures and Tables for Inspection by Attributes
AS 1520	Fibreboard Containers for General Purposes
AS 1821-23	Suppliers Quality Control Systems, Levels 1, 2 and 3
AS 2000	Guide to AS 1821-23 Suppliers Quality Control Systems
AS 2243	Safety in Laboratories Part 1— General Part 2— Chemical
AS 2490	Sampling Procedures and Charts for Inspection by Variables for Percent Defective
AS 2508	Safe Storage and Handling Information Cards for Hazardous Materials 2508.3.001 — Acetone 2508.3.017 — Ethanol (methylated spirits) 2508.8.002 — Hydrochloric Acid 2508.8.006 — Sodium Hydroxide
BS 612	Nessler Cylinders

British Pharmacopoeia (1980)

4 DEFINITIONS. For the purpose of this standard, the following definitions apply:

4.1 Capacity corresponding to any scale mark—the volume of water at 20°C that will fill the measure to that line with the measure at 20°C, the measure standing on a level surface and the observer's eye being level with the front scale mark, and the lowest point of the meniscus appearing to touch the top edge of the mark.

4.2 Permanently marked—markings which endure for the life of the measure when it is used in the preparation and dispensing of solutions or mixtures of a medical nature. This includes reagents for routine analysis of such solutions or mixtures as well as the associated cleaning processes. Such markings may be applied by any suitable process, e.g. moulding, etching, chemical adhesion.

NOTES:

1. Although markings defined here are intended to include both the glass-etched type and the pigmented type, the method of test set out in Appendix G is unlikely to be meaningful in relation to the first type of marking as this would require dissolution of the glass surface. However, it is considered to be a minimal requirement that the second type of marking does not show deterioration when exposed to that test (see also NOTE to Clause 9.10.2).
2. Engraving of glass is particularly advised against as it causes local weakening of the glass and facilitates fracturing and breakage of such a measure when it is exposed to mechanical and thermal stresses.

5 MATERIAL. The measure shall be formed from colourless, high grade, annealed glass, free of particulate matter. The material shall not be a source of contamination to liquids contained within the measure in accordance with the requirements for Glass Types I and II of the current British Pharmacopoeia and Appendix C.

Lead glass shall not be used.

NOTES:

1. At the time of issue of this standard, Appendix XVIII B of the B.P. (1980) was current.
2. If the measure is subjected to autoclaving in normal usage, only Type I Glass should be used in its manufacture.

6 DESIGN.

6.1 General. The measure shall be of the shape appropriate to its nominal capacity as given by Figs 1 and 2.

6.2 Cone angle. The external surface of each conical measure (see Fig. 1) shall have included angles as follows:

For nominal capacities of 5 mL and 10 mL, 13.5 ±2.0 degrees.

For nominal capacities of 20 mL up to 200 mL, 15.0 ±3.0 degrees.

6.3 Pouring lip. Each measure shall be provided with a pouring lip so designed that when the measure has been filled to the highest scale mark with water, the contents may be poured in a narrow stream which falls clear of the outside of the measure.

6.4 Bottom of measuring space. The bottom of the measuring space shall be rounded and shall merge smoothly into the sides of the measure.

7 CONSTRUCTION.

7.1 General. The measure shall be of the appropriate form given by Figs 1 and 2 and shall be 'clear' (see Clause 9.6) and smooth, free from any defects affecting the reading, operation and life of the measure, such as cracking, scratches, chipping and internal strain.