AS 2224.1—2009

Australian Standard®

Medicine measures

Part 1: Glass

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- National Association of Testing Authorities Australia
- National Measurement Institute
- Pharmaceutical Society of Australia NSW Branch
- Royal College of Pathologists of Australasia
- Science Industry Australia
- The Pharmacy Guild of Australia, NSW Branch
- The Royal Australian Chemical Institute
- The University of New South Wales

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Part 1: Glass

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PREFACE

This Standard was prepared by the Standards Australia Committee CH-001, Laboratory Glassware and Related Apparatus, to supersede AS 2224.1—1986, *Medicine measures (including paediatric droppers)*, Part 1: *Glass—For general use*.

The objective of this Standard is to ensure that the requirements for two types of glass measure—one of tumbler form and one of conical form are achieved.

It is emphasized that the tests were devised on the basis of their relationship to practical usage. In real life situations (a) it is only the surface of the measure that comes into direct contact with its contents and (b) the contents are in contact with the measure for perhaps only a few minutes at a time or in extreme cases for up to 8 h or 12 h overnight in a hospital. An acceptable test needs to recognize such practical situations and indeed this was the philosophy of the drafting committee throughout the production of this Standard.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

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1 SCOPE

This Standard specifies requirements for two types of glass medicine measure—one of tumbler form and one of conical form.

NOTE: Pediatric droppers are not manufactured from glass.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS
2243 Safety in laboratories
2243.1 Part 1: Planning and operational aspects
2243.2 Part 2: Chemical aspects

3 DEFINITIONS

For the purpose of this Standard, the following definitions apply:

3.1 Capacity at any graduation line

The volume of distilled water at 20°C, expressed in millilitres, contained by the relevant measure at 20°C, when filled to the graduation line under test.

NOTE: The determination of the capacity of measures is described in Appendix B.

3.2 Permanently marked

Markings that endure for the life of the measure when it is used in measuring medicines as well as in associated cleaning processes.

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 D is most 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 8.6.2).

2 Engraving of glass is particularly advised against as it causes local weakening of the glass and facilitates fracturing and breakage when exposed to mechanical and thermal stresses.

3.3 Lead glass

Glass with lead added in the manufacturing process.

4 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. Lead glass shall not be used.

NOTE: The determination of resistance for leaching is described in Appendix A.

