Australian Standard™

Laboratory glassware—Density hydrometers

Standards Australia

This Australian Standard was prepared by Committee CH-001, Laboratory Glassware and Related Apparatus. It was approved on behalf of the Council of Standards Australia on 31 March 2003 and published on 8 May 2003.

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Laboratory glassware—Density hydrometers

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PREFACE

This Standard was prepared by the Standards Australia Committee CH-001, Laboratory Glassware and Related Apparatus to supersede AS 2026—1994, *Density hydrometers*.

The objective of this Standard is to provide a document giving requirements for density hydrometers. This edition is essentially the same as 1994 edition but has been reformatted for clarity.

The main provisions of this Standard follow closely those of ISO 649:1981, *Laboratory glassware—Density hydrometers for general purposes*, Part 1: *Specification*, and Part 2: *Test methods and use*, with minor differences in some technical details and in the units which are used.

Five series of hydrometers are specified, and dimensions were chosen that would lead to convenience in use and economy in manufacture.

To assist users who may, for special purposes, require a hydrometer which is not included in any of the five series specified, appendices are provided giving notes on the design and adjustment of hydrometers, a method for the determination of density, the measurement of liquid in bulk and for suitable vessels for use with hydrometers.

The Standard does not make provision for the high surface tension category for hydrometers.

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

CONTENTS

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1 SCOPE

This specification sets out the requirements for five main series and three sub-series of glass hydrometers of constant mass which are graduated to indicate the density (mass per unit volume) of a liquid. The specification does not include hydrometers for use with liquefied petroleum gas or lead-acid batteries.

NOTES:

1 Appendix A provides information on the use of hydrometers.

2 Appendix B provides information on the design of hydrometers.

3 Appendix C provides information on vessels which may be used when making hydrometer measurements.

4 Appendix D provides information on the application of hydrometer values to liquids in bulk.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard

AS	
2163	Laboratory glassware—Measuring cylinders
2849	Density of water—Numerical value
ISO	
649	Laboratory glassware—Density hydrometers for general purposes
649-1	Part 1: Specification
649-2	Part 2: Test methods and use
3675	Crude petroleum and liquid petroleum products—Laboratory determination of density—Hydrometer method

3 DESIGNATION

The five series of hydrometers are designated by the symbols L20, L50, M50, M100, and S50, where L, M, and S indicate long, medium, and short, respectively, and 20, 50, and 100 indicate the range of the scale on each hydrometer in the particular series.

The L50, M50 and S50 series contain the special sub-series designated by the suffix SP. These hydrometers are used mainly in petroleum technology.

4 RANGES

4.1 Main series

Each main series of hydrometer shall cover the range of 600 kg/m^3 to 2000 kg/m^3 or 0.600 g/mL to 2.00 g/mL according to the scale marking.

4.2 Sub-series

Each sub-series of hydrometer shall cover the range of 600 kg/m^3 to 1100 kg/m^3 or 0.600 g/mL to 1.100 g/mL according to the scale marking.

