Australian Standard®

Graduated straight pipettes

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Australian Chamber of Commerce and Industry

Australian Government Analytical Laboratories

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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 2167.

The objective of this Standard is to provide specifications for a range of graduated straight pipettes that are used in the laboratory.

This Standard differs from the previous edition in that pipettes with a 15-second waiting time have been included in the range and a new table of specified delivery times based on ISO 835/1/2/3—1981, *Laboratory glassware—Graduated pipettes* has been added.

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Originated as AS R7—1947.
Previous edition AS 2167—1978.
Second edition 1996.

STANDARDS AUSTRALIA

Australian Standard

Graduated straight pipettes

1 SCOPE This Standard applies to a series of graduated straight pipettes suitable for general laboratory purposes. The following four types of pipette are specified:

(a) Type I-N pipettes, which are adjusted for delivery of a liquid from the zero line at the top to any graduation line, where the nominal capacity is represented by the lowest graduation line.

(b) Type II-N pipettes, which are adjusted for delivery of a liquid from any graduation line down to the jet, where the nominal capacity is represented by the highest graduation line.

(c) Type III-N and Type III-W pipettes, which are adjusted for delivery of a liquid from the zero line at the top to any graduation line, where the nominal capacity is obtained by delivery down to the jet.

Two classes of accuracy are specified, Class A pipettes being of higher accuracy than Class B pipettes. Type III-N pipettes are only Class B while Type III-W pipettes are only Class A.

NOTE: The method of verification and notes for the use of pipettes are given in AS 2162.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
2162 Code of practice for the use of volumetric glassware

BS
1797 Schedule for tables for use in the calibration of volumetric glassware

ISO
1769 Laboratory glassware—Pipettes—Colour coding

3 DEFINITIONS For the purpose of this Standard the definitions below apply.

3.1 Capacity

3.1.1 *Type I-N pipettes*—the capacity corresponding to any graduation line is the volume of water at 20°C, expressed in millilitres, delivered by the pipette at 20°C, when emptied from the zero line to that graduation line, outflow being unrestricted until the final setting is made on the graduation line and no waiting time being allowed for drainage before the final reading is taken.

3.1.2 *Type II-N pipettes*—the capacity corresponding to any graduation line is the volume of water at 20°C, expressed in millilitres, delivered by the pipette at 20°C, when emptied from that graduation line to the jet. To ensure that delivery is complete, a waiting time of approximately 3 s shall be observed before the jet of the pipette is removed from contact with the wall of the receiving vessel.

NOTE: The waiting period is specified only for the purpose of definition. In practice, it is unnecessary to adhere closely to this period; it is sufficient to be certain that the meniscus has come to rest in the jet before the pipette is removed from contact with the receiving vessel.