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Third edition
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Laboratory glass and plastic ware — Volumetric instruments — Methods for testing of capacity and for use

*Verrerie et matériel en plastique de laboratoire — Instruments
volumétriques — Méthodes d'essai de la capacité et d'utilisation*



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Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Principle	2
5 Volume and reference temperature	2
5.1 Unit of volume.....	2
5.2 Reference temperature.....	2
6 Apparatus and calibration liquid	2
6.1 Balance.....	2
6.2 Measurement devices.....	2
6.3 Calibration liquid.....	3
6.4 Receiving vessel.....	3
7 Factors affecting the accuracy of volumetric instruments	3
7.1 General.....	3
7.2 Temperature.....	3
7.2.1 Temperature of the volumetric instrument.....	3
7.2.2 Temperature of calibration liquid.....	3
7.3 Cleanliness of surface.....	4
7.4 Conditions of used volumetric instruments.....	4
7.5 Delivery time and waiting time.....	4
8 Setting the meniscus	5
8.1 General.....	5
8.2 Setting the meniscus.....	5
8.2.1 Meniscus of transparent liquids.....	5
8.2.2 Meniscus of opaque liquids.....	7
9 Calibration procedure	7
9.1 General.....	7
9.2 Test room.....	7
9.3 Filling and delivery.....	7
9.3.1 Volumetric flasks and measuring cylinders.....	7
9.3.2 Pipettes adjusted to deliver.....	7
9.3.3 Pipettes adjusted to contain.....	8
9.3.4 Burettes adjusted to deliver.....	8
9.3.5 Pycnometers.....	9
9.4 Weighing.....	9
9.5 Volume and uncertainty calculation.....	9
10 Procedure for use	10
10.1 General.....	10
10.2 Volumetric flasks (in accordance with ISO 1042 or ISO 5215).....	11
10.3 Measuring cylinders (in accordance with ISO 4788 or ISO 6706).....	11
10.4 Burettes (in accordance with ISO 385).....	11
10.5 Pipettes.....	12
10.5.1 Pipettes adjusted to deliver (see ISO 648 and ISO 835, or other pipettes, e.g. plastic ones).....	12
10.5.2 Pipettes adjusted to contain.....	12
10.6 Pycnometers.....	12
Annex A (informative) Cleaning of volumetric glassware	13

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Annex B (informative) Cleaning of volumetric plasticware	14
Annex C (normative) Calculation formulae and tables	15
Annex D (informative) Coefficient of cubic thermal expansion	19
Annex E (informative) Uncertainty estimation and repeatability calculation	20
Bibliography	21

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 48, *Laboratory equipment*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 332, *Laboratory equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 4787:2010), which has been technically revised.

The main changes compared to the previous edition are as follows:

- a) volumetric plastic ware has been included;
- b) new information on meniscus adjustment of convex meniscus has been added; namely, altered procedure "Upper edge of the graduation line is horizontally tangential to the highest point of meniscus" as compared to older procedure "Upper edge of the graduation line is horizontally tangential to the lowest point of the meniscus";
- c) improved figures for meniscus adjustment have been provided;
- d) [Table 1](#) has been improved;
- e) new [Table 2](#) for minimum requirements for the measurement devices has been added;
- f) new test room ambient conditions have been added;
- g) new information regarding repeatability and uncertainty has been added in [Annex E](#);
- h) [Formula \(C.1\)](#) has been changed to [Formula \(1\)](#).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

The International Standards for the individual volumetric instruments include clauses on the specification of capacity (volume); these clauses describe the method of manipulation in sufficient detail to determine the capacity without ambiguity. This document contains supplementary information.