

**Laboratory glassware - Volumetric instruments -
Methods for testing of capacity and for use**

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 4787:2010 sisaldab Euroopa standardi EN ISO 4787:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 30.06.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.04.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 4787:2010 consists of the English text of the European standard EN ISO 4787:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.06.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 15.04.2010.

The standard is available from Estonian standardisation organisation.

ICS 17.060

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English Version

**Laboratory glassware - Volumetric instruments - Methods for
testing of capacity and for use (ISO 4787:2010)**

Verrerie de laboratoire - Instruments volumétriques -
Méthodes de vérification de la capacité et d'utilisation (ISO
4787:2010)

Laborgeräte aus Glas - Volumenmessgeräte -
Prüfverfahren und Anwendung (ISO 4787:2010)

This European Standard was approved by CEN on 15 March 2010.

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Foreword

This document (EN ISO 4787:2010) has been prepared by Technical Committee ISO/TC 48 "Laboratory equipment" in collaboration with Technical Committee CEN/TC 332 "Laboratory equipment" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 4787:2010 has been approved by CEN as a EN ISO 4787:2010 without any modification.

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Laboratory glassware — Volumetric instruments — Methods for testing of capacity and for use

1 Scope

This International Standard provides methods for the testing, calibration and use of volumetric instruments made from glass in order to obtain the best accuracy in use.

NOTE Testing is the process by which the conformity of the individual volumetric instrument with the appropriate standard is determined, culminating in the determination of its error of measurement at one or more points.

The International Standards for the individual volumetric instruments include clauses on the definition of capacity; these clauses describe the method of manipulation in sufficient detail to define the capacity without ambiguity. This International Standard contains supplementary information.

The procedures are applicable to volumetric instruments with nominal capacities in the range of 0,1 ml to 10 000 ml. These include: single-volume pipettes (see ISO 648) without subdivisions; graduated measuring pipettes and dilution pipettes, with partial or complete subdivisions (see ISO 835); burettes (see ISO 385); volumetric flasks (see ISO 1042); and graduated measuring cylinders (see ISO 4788). The procedures are not recommended for testing of volumetric instruments with capacities below 0,1 ml such as micro-glassware.

This International Standard does not deal specifically with pycnometers as specified in ISO 3507. However, the procedures specified below for the determination of volume of glassware can, for the most part, also be followed for the calibration of pycnometers.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 385, *Laboratory glassware — Burettes*

ISO 648, *Laboratory glassware — Single-volume pipettes*

ISO 835, *Laboratory glassware — Graduated pipettes*

ISO 1042, *Laboratory glassware — One-mark volumetric flasks*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 4788, *Laboratory glassware — Graduated measuring cylinders*

ISO/IEC Guide 99, *International vocabulary of metrology — Basic and general concepts and associated terms (VIM)*