

Laboratory glassware - Bottles - Part 1: Screw-neck bottles (ISO 4796-1:2016)

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NATIONAL FOREWORD

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EUROPEAN STANDARD

EN ISO 4796-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN ISO 4796-1:2000

English Version

Laboratory glassware - Bottles - Part 1: Screw-neck bottles (ISO 4796-1:2016)

Verrerie de laboratoire - Flacons - Partie 1: Flacons à
col à vis (ISO 4796-1:2016)

Laborgeräte aus Glas - Flaschen - Teil 1: Flaschen mit
Gewindehals (ISO 4796-1:2016)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 4796-1:2016) 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of an identical text or by endorsement, at the latest by August 2016, and conflicting national standards shall be withdrawn at the latest by August 2016.

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.

This document supersedes EN ISO 4796-1:2000.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 4796-1:2016 has been approved by CEN as EN ISO 4796-1:2016 without any modification.

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#).

The committee responsible for this document is ISO/TC 48, *Laboratory equipment*.

This second edition cancels and replaces the first edition (ISO 4796-1:2000), which has been technically revised to include screw-neck bottles with nominal capacities of 150 ml, 750 ml, and 3 500 ml.

ISO 4796 consists of the following parts, under the general title *Laboratory glassware — Bottles*:

- *Part 1: Screw-neck bottles*
- *Part 2: Conical neck bottles*
- *Part 3: Aspirator bottles*

Laboratory glassware — Bottles —

Part 1: Screw-neck bottles

1 Scope

This part of ISO 4796 specifies a series of screw-neck bottles suitable for the storage of fluid liquid and solid chemicals and reagents in general laboratory use. These bottles with nominal volumes ranging from 25 ml to 20 000 ml are also suitable for the preparation and storage of microbiological growth media.

2 Normative references

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

ISO 3585, *Borosilicate glass 3.3 — Properties*

3 Capacities

3.1 The nominal capacities of screw-neck bottles shall be chosen from the following series:

- 25 ml — 50 ml — 100 ml — 150 ml — 250 ml — 500 ml and 750 ml;
- 1 l — 2 l — 3,5 l — 5 l — 10 l — 15 l and 20 l.

3.2 The nominal capacity of a bottle indicates the quantity of liquid which a bottle of average wall thickness shall contain when the bottle is filled to the turn of the shoulder.

3.3 The design of the bottle shall be such that the total capacity to the base of the neck shall be approximately 15 % greater than that to the shoulder.

4 Dimensions

The dimensions and tolerances of screw-neck bottles are given in [Figure 1](#), [Figure 2](#), and [Table 1](#).

Table 1 — Dimensions

| Nominal capacity | Total height h_1 | Height to shoulder h_2 | Outside diameter d_1 | Wall thickness s | Internal neck diameter d_2 |
|------------------|-----------------------|-----------------------------|---------------------------|-----------------------|---------------------------------|
| ml | mm approx. | mm approx. | mm approx. | mm min. | mm min. |
| 25 | 70 | 41 | 36 | 1,0 | 12,5 |
| 50 | 87 | 50 | 46 | 1,0 | 15 |
| 100 | 100 | 60 | 56 | 1,5 | 27 |
| 150 | 110 | 70 | 62 | 1,5 | 27 |