

Laboratory glassware — Boiling flasks with conical ground joints

The European Standard EN ISO 4797:2004 has the status of a
British Standard

ICS 71.040.20

National foreword

This British Standard is the official English language version of EN ISO 4797:2004. It is identical with ISO 4797:2004. It supersedes BS 6352:1983 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee LB1/36, Laboratory glassware and related apparatus, to Subcommittee LB1/36/I, General and volumetric, glass and plastics apparatus, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, the EN ISO foreword page, the ISO title page, pages ii and iii, a blank page, pages 1 to 3 and a back cover.

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English version

**Laboratory glassware - Boiling flasks with conical ground joints
(ISO 4797:2004)**

Verrerie de laboratoire - Fioles coniques et ballons à col
muni d'un assemblage conique rodé (ISO 4797:2004)

Laborgeräte aus Glas - Erlenmeyer-, Rund- und Stehkolben
mit Kegelschliff (ISO 4797:2004)

This European Standard was approved by CEN on 7 June 2004.

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Foreword

The text of ISO 4797:2004 has been prepared by Technical Committee ISO/TC 48 "Laboratory glassware and related apparatus" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 4797:2004 by 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of an identical text or by endorsement, at the latest by May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

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Endorsement notice

The text of ISO 4797:2004 has been approved by CEN as EN ISO 4797:2004 without any modifications.

INTERNATIONAL
STANDARD

ISO
4797

Second edition
2004-07-01

**Laboratory glassware — Boiling flasks
with conical ground joints**

*Verrerie de laboratoire — Fioles coniques et ballons à col muni d'un
assemblage conique rodé*



Reference number
ISO 4797:2004(E)

Foreword

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

ISO 4797 was prepared by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus*, Subcommittee SC 6, *Laboratory and volumetric ware*.

This second edition cancels and replaces the first edition (ISO 4797:1981), which has been technically revised to incorporate the following changes:

- a) dimensions and joint sizes have been adapted to the current state of manufacturing;
- b) two series have been introduced for conical flasks;
- c) height tolerances have been added to Series 1;
- d) conical flask of 10 ml nominal volume has been added;
- e) round-bottom flasks of 10 ml, 25 ml, 5 l, 6 l and 10 l nominal volume have been added.

Laboratory glassware — Boiling flasks with conical ground joints

1 Scope

This International Standard specifies requirements for an internationally acceptable series of boiling flasks with conical ground joints for general laboratory purposes.

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 383, *Laboratory glassware — Interchangeable conical ground joints*

ISO 1773, *Laboratory glassware — Narrow-necked boiling flasks*

ISO 3585, *Borosilicate glass 3.3 — Properties*

3 Types

Three types of boiling flasks with conical ground joints are specified:

- a) conical flasks;
- b) flat-bottom flasks;
- c) round-bottom flasks.

4 Series of capacities

Two series are specified for each type of boiling flask with conical ground joints. The series differ in height and in selection of joint sizes. It is recommended that, in national standards, one of these series is chosen.

5 Material

Boiling flasks shall be made from borosilicate glass 3.3 in accordance with ISO 3585, and shall be free from visible defects which might affect performance and free from any internal stress which would impair the performance of the flask.

6 Dimensions

The external diameter of body of round-bottom flasks and flat-bottom flasks, the external diameter of body at the widest point of conical flasks and the minimum wall thickness shall comply with the dimensions specified in ISO 1773.

The nominal overall height of the boiling flasks with conical ground joints shall be as specified in Tables 1 to 3.

7 Ground glass joints

The sizes of the conical joints fitted to the boiling flasks shall be as given in Tables 1 to 3. The joints shall comply with the requirements of ISO 383, *k6* series.

8 Marking

The following inscriptions shall be permanently and legibly marked on all laboratory boiling flasks with conical ground joints:

- the nominal volume of the boiling flask, for example “100 ml”;
- the size of the conical ground joint, for example “29/32”;
- the manufacturer's and/or vendor's name and/or mark;
- an area with a surface suitable for marking with a pencil.

It is recommended that reference be made on each flask to this International Standard, for example by the inscription “ISO 4797”.

Table 1 — Overall height and joint sizes for conical flasks

Nominal volume ml	Series 1		Series 2	
	Overall height mm	Joint sizes	Nominal overall height mm	Joint sizes
10	60 ± 3	14/23	—	—
25	70 ± 3	14/23	70	14/23 19/26
50	85 ± 6	19/26	85	14/23 19/26
100	100 ± 6	14/23 19/26 24/29 29/32	105	24/29 29/32
250	140 ± 6	19/26 24/29	135	19/26 24/29
500	175 ± 6	29/32	170	29/32 34/35
1 000	220 ± 7	24/29 29/32	210	24/29 29/32
2 000	270 ± 7	34/35	275	34/35
3 000	—	—	310	34/35
5 000	—	—	365	45/40

Table 2 — Overall height and joint sizes for flat-bottom flasks

Nominal volume ml	Series 1		Series 2	
	Overall height mm	Joint sizes	Nominal overall height mm	Joint sizes
50	85 ± 3	19/26 29/32	85	19/26 24/29
100	103 ± 6		100	19/26 24/29 29/32 34/35
250	130 ± 6		125	
500	160 ± 6	29/32	145	24/29
1 000	187 ± 6		175	29/32
2 000	230 ± 6		210	34/35
4 000	—	—	255	45/40

Table 3 — Overall height and joint sizes for round-bottom flasks

Nominal volume ml	Series 1		Series 2	
	Overall height mm	Joint sizes	Nominal overall height mm	Joint sizes
10	70 ± 3	14/23	—	—
25	85 ± 3			
50	90 ± 6	14/23 19/26	90	14/23 19/26 29/32
100	105 ± 6	24/29 29/32	110	24/29 34/35
250	140 ± 6	19/26 24/29 29/32	135	19/26 24/29 29/32 34/35
500	163 ± 6	24/29 29/32	155	19/26 24/29
1 000	200 ± 7		185	29/32 34/35
2 000	240 ± 7		220	45/40
4 000	290 ± 7	29/32 45/40	270	34/35 45/40
5 000	—	—	275	29/32 34/35 45/40
6 000	320 ± 7	45/40	325	45/40
10 000	380 ± 7	45/40	350	34/35 45/40

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