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**Laboratory glassware — Petri dishes**

*Verrerie de laboratoire — Boîtes de Petri*

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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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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](http://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 second edition cancels and replaces the first edition (ISO 13132:2011), which has been technically revised.

The main changes are as follows:

- additional series C for class HGB 3 has been added;
- new dimensions have been added to the series A;
- thermal shock resistance has been added.

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](http://www.iso.org/members.html).

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## Laboratory glassware — Petri dishes

### 1 Scope

This document specifies requirements and tests for glass Petri dishes intended for general laboratory purposes and microbiological work.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

~~<std>ISO 719, Glass — Hydrolytic resistance of glass grains at 98 °C — Method of test and classification</std>~~

~~<std>ISO 718, Laboratory glassware — Thermal shock and thermal shock endurance — Test methods</std>~~

ISO 718, Laboratory glassware — Thermal shock and thermal shock endurance — Test methods

ISO 719, Glass — Hydrolytic resistance of glass grains at 98 °C — Method of test and classification

### 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp><https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/><https://www.electropedia.org/>

### 4 Types

Two types of Petri dishes are specified in this document:

- Type 1 — Thick-walled Petri dishes
- Type 2 — Thin-walled Petri dishes

## 5 Nominal sizes and series

### 5.1 Nominal sizes

Petri dishes shall have one of the following nominal sizes:

40 mm, 50 mm, 60 mm, 80 mm, 90 mm, 100 mm, 120 mm, 150 mm, 180 mm or 200 mm.

NOTE For Series B, nominal sizes refer to the external diameter of the bottom dish.

### 5.2 Series

Petri dishes shall comply with the following dimensional requirements:

- For Series A, the dimensions shall be in accordance with Table 1 (only for Class HGB 1 or HGB 2).
- For Series B, the dimensions shall be in accordance with Table 2 (only for Class HGB 1 or HGB 2).
- For Series C, the dimensions shall be in accordance with Table 3 (only for Class HGB 3).

NOTE "HGB" stands for hydrolytic resistance, according to ISO 719.

## 6 Designation

Petri dishes in accordance with this document shall be designated by their nominal size, followed by the type and the series.

EXAMPLE 1 Designation of a thick-walled Petri dish with a nominal size of 120 mm, Type 1, Series A:

Petri dish ISO 13132 — 120 × 20 — 1A

If bottom dishes and top dishes (as shown in Figure 1) are ordered separately, the following designations shall be used.

EXAMPLE 2 Designation of a thick-walled bottom dish with a nominal size of 120 mm, Type 1, Series A:

Petri bottom dish ISO 13132 — 120 × 20 — 1A — 2

EXAMPLE 3 Designation of a thick-walled top dish with a nominal size of 120 mm, Type 1, Series A:

Petri top dish ISO 13132 — 120 × 20 — 1A — 1

## 7 Material

Petri dishes shall be manufactured from transparent glass of hydrolytic resistance Class HGB 1, Class HGB 2 or Class HGB 3 in accordance with ISO 719. Series A and B can be manufactured from transparent glass of hydrolytic resistance of class HGB 1 or HGB 2, and the dimensions according to 8.1 respectively 8.2 shall be respected. Series C shall be manufactured from transparent glass of hydrolytic resistance made of HGB 3 and the dimensions according to 8.3 shall be respected.

The glass shall be reasonably free from residual strain and from defects which can impair safety, durability or appearance such as mould marks and waviness.

The glass shall not have any pronounced tint.

Figure 1 includes a schematical presentation of a petri dish.

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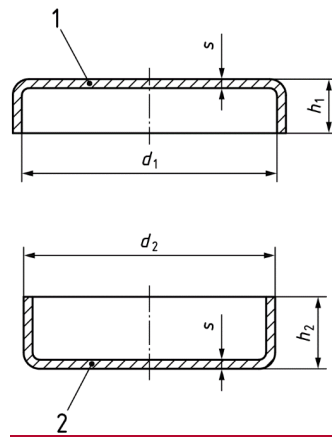
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**Key**

- 1 top dish
- 2 bottom dish
- $d_1$  inner diameter for dish cover
- $h_1$  height dish cover
- $d_2$  outer diameter for dish bottom
- $h_2$  height dish bottom
- $s$  wall thickness

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**Figure 1 — Petri dish**

**8 Dimensions**

**8.1 Series A Petri dishes (class HGB 1 or HGB 2)**

Series A Petri dishes shall comply with the dimensions specified in Table 1 and shall have hydrolytic resistance of class HGB 1 or HGB 2.

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**Table 1 — Dimensions for Series A Petri dishes**

Dimensions in millimetres

| Nominal size | Type 1 — Thick-walled |                                       |         |         |           | Type 2 — Thin-walled |            |              |              |           |
|--------------|-----------------------|---------------------------------------|---------|---------|-----------|----------------------|------------|--------------|--------------|-----------|
|              | $d_1$                 | $d_2$                                 | $h_1$   | $h_2$   | $s$       | $d_1$                | $d_2$      | $h_1$        | $h_2$        | $s$       |
|              |                       | $\begin{matrix} 0 \\ -1 \end{matrix}$ | $\pm 1$ | $\pm 1$ | $\approx$ |                      |            |              |              | $\pm 0,3$ |
| 50 × 12      | —                     | —                                     | —       | —       | —         | $47 \pm 1$           | $45 \pm 1$ | $9 \pm 1,5$  | $14 \pm 1,5$ | 1,3       |
| 60 × 15      | —                     | —                                     | —       | —       | —         | $57 \pm 1$           | $54 \pm 1$ | $12 \pm 1,5$ | $15 \pm 1,5$ | 1,8       |

|          |                                 |     |    |    |     |           |             |            |          |     |
|----------|---------------------------------|-----|----|----|-----|-----------|-------------|------------|----------|-----|
| 60 × 20  | 55 <sup>+1,5</sup> <sub>0</sub> | 54  | 15 | 20 | 2,5 | 56 ± 1    | 53 ± 1      | 15 ± 1,5   | 20 ± 2   | 1,8 |
| 80 × 15  | —                               | —   | —  | —  | —   | 77 ± 1    | 74 ± 1      | 11 ± 1,5   | 15 ± 1,5 | 1,3 |
| 80 × 20  | 71 <sup>+1,5</sup> <sub>0</sub> | 70  | 15 | 20 | 2,5 | 76 ± 1    | 73 ± 1      | 15 ± 1,5   | 20 ± 2   | 1,8 |
| 90 × 15  | —                               | —   | —  | —  | —   | 86 ± 1    | 84 ± 1      | 12 ± 1,5   | 15 ± 1,5 | 1,8 |
| 95 × 18  | —                               | —   | —  | —  | —   | 93 ± 1,5  | 90 ± 1      | 16 ± 1,5   | 18 ± 1,5 | 1,6 |
| 100 × 15 | 91 <sup>+1,5</sup> <sub>0</sub> | 90  | 13 | 15 | 3   | 96 ± 1    | 93 ± 1      | 11,5 ± 1,5 | 15 ± 2   | 1,8 |
| 100 × 20 |                                 |     |    | 20 |     | 96 ± 1    | 93 ± 1      | 11,5 ± 1,5 | 20 ± 2   | 1,8 |
| 120 × 20 | 111 <sup>+2</sup> <sub>0</sub>  | 110 | 15 | 20 | 3,5 | 116 ± 1   | 113 ± 1     | 15 ± 1,5   | 20 ± 2   | 1,8 |
| 150 × 25 | —                               | —   | —  | —  | —   | 145 ± 1,5 | 140 ± 1,5   | 20 ± 2     | 26 ± 2   | 2   |
| 150 × 30 | 140 <sup>+2</sup> <sub>0</sub>  | 139 | 15 | 30 | 4   | 146 ± 1,5 | 141,5 ± 1,5 | 18 ± 2     | 27 ± 2   | 1,8 |
| 180 × 30 | —                               | —   | —  | —  | —   | 185 ± 1,5 | 179 ± 1,5   | 27 ± 2     | 30 ± 2   | 2   |
| 200 × 30 | —                               | —   | —  | —  | —   | 195 ± 2   | 190 ± 2     | 25 ± 2     | 30 ± 2   | 2   |

8.2 Series B Petri dishes (class HGB 1 or HGB 2)

Series B Petri dishes shall comply with the dimensions specified in Table 2 and shall have hydrolytic resistance of class HGB 1 or HGB 2. For any pair of Series B Petri dishes, the difference between the internal diameter of the top dish and the external diameter of the bottom dish shall be between 2 mm to 4 mm.

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Table 2 — Dimensions for Series B Petri dishes

Dimensions in millimetres

| Nominal size | Type 2 — Thin-walled |         |         |         |      |
|--------------|----------------------|---------|---------|---------|------|
|              | $d_1$                | $d_2$   | $h_1$   | $h_2$   | $s$  |
|              | +1<br>0              | 0<br>-1 | 0<br>-1 | +1<br>0 | min. |
| 50 × 17      | 53                   | 50      | 15      | 17      | 1,0  |
| 80 × 17      | 83                   | 80      | 15      | 17      | 1,0  |
| 100 × 17     | 103                  | 100     | 15      | 17      | 1,5  |
| 150 × 20     | 153                  | 150     | 17      | 20      | 1,5  |
| 200 × 20     | 203                  | 200     | 20      | 20      | 1,5  |

8.3 Series C Petri dishes (class HGB 3)

Series C Petri dishes shall comply with the dimensions specified in Table 3 and shall have hydrolytic resistance of class HGB 3.

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Table 3 — Dimensions for Series C Petri dishes

Dimensions in millimetres

| Nominal size | Type 2 — Thin-walled |       |       |       |     |
|--------------|----------------------|-------|-------|-------|-----|
|              | $d_1$                | $d_2$ | $h_1$ | $h_2$ | $s$ |