INTERNATIONAL STANDARD 4796

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Laboratory glassware — Bottles

Verrerie de laboratoire — Flacons

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4796 was developed by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus*, and was circulated to the member bodies in March 1976.

It has been approved by the member bodies of the following countries :

Australia	Germany	Netherlands
Austria	Hungary	Romania
Belgium	India	South Africa, Rep. of
Canada	Israel	Spain
Chile	Italy	Turkey
Czechoslovakia	Korea, Rep. of	United Kingdom
France	Mexico	U.S.S.R.

No member body expressed disapproval of the document.

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Laboratory glassware — Bottles

0 INTRODUCTION

Bottles used in a laboratory are often used to contain dangerous chemicals such as strong acids and it is therefore important that they are designed for maximum safety in use.

Two features primarily affect safety in handling :

— the neck and upper portion of the bottle shall be so designed that no air is trapped in the shoulder when the bottle, filled to its nominal capacity, is tipped for pouring; this avoids the danger of gulping and splashing of the contents. This feature can most conveniently be achieved by making the upper portion of the bottle of conical shape;

— the outside rim or lip at the top of the neck shall be so designed that, at the end of the pouring operation, the last drop is transferred to the receiving vessel and does not run down the outside of the bottle. The precise shape of the lip will depend to some extent on the method of manufacture and can only be specified in general terms.

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies an internationally acceptable series of bottles suitable for the storage of liquid chemicals and reagents in general laboratory use.

2 REFERENCE

ISO 383, *Laboratory glassware — Interchangeable conical ground joints.*

3 SERIES OF CAPACITIES

3.1 The nominal capacities of laboratory bottles shall be chosen from the following series :

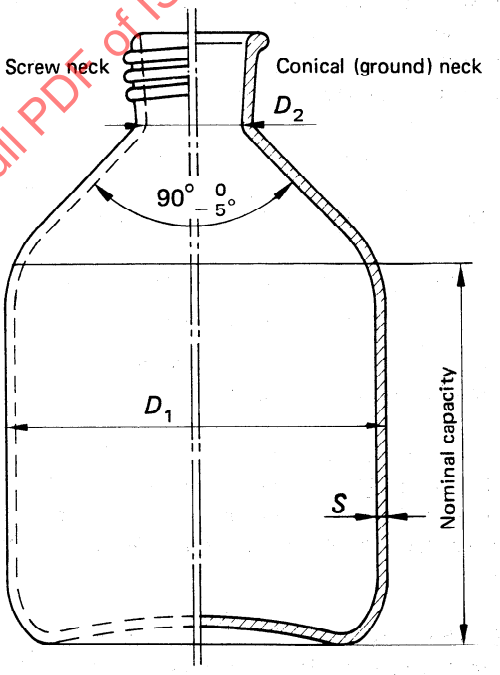
50 — 100 — 250 and 500 ml; 1 — 2 — 5 and 10 litres.

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

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

4 DIMENSIONS

The dimensions and tolerances of laboratory bottles are given in the figure and table below.



Nominal capacity	Outside diameter $D_1 \approx$	Wall thickness S min.	Internal neck diameter D_2 min.
ml	mm	mm	mm
50	43	1	8,5
100	54	1,2	10,5
250	71	1,3	13
500	90	1,3	17
1 000	110	1,7	22
2 000	135	2	22,5
5 000	185	2,3	35
10 000	230	2,7	55