International Standard 3819

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Laboratory glassware — Beakers

Verrerie de laboratoire — Béchers

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Foreword

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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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3819 was prepared by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus.*

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Laboratory glassware — Beakers

0 Introduction

The dimensions specified for beakers in this International Standard are close to the average dimensions of current production in most manufacturing countries.

Considerably large dimensional tolerances are specified, but they are not intended to be manufacturing tolerances. The main part of current production, however, is now manufactured within the limits specified in this International Standard.

1 Scope and field of application

This International Standard specifies requirements for an internationally acceptable series of glass beakers for laboratory use.

2 References

ISO 718, *Laboratory glassware — Methods for thermal shock tests.*

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

ISO 3585, *Glass plant, pipeline and fittings — Properties of borosilicate glass 3.3*

3 Types of beaker

Two types of beaker are specified:

a) low-form beaker with spout;

b) tall-form beaker with spout.

4 Series of beakers

The series of beakers covered by this International Standard and defined by type and nominal capacity shall be as follows:

a) low-form beakers: 5 — 10 — 25 — 50 — 100 — 250 — 400 — 600 — 800 — 1 000 — 2 000 — 3 000 — 5 000 ml;

b) tall-form beakers: 50 — 100 — 150 — 250 — 400 — 600 — 800 — 1 000 — 2 000 — 3 000 ml.

5 Capacity

The design of the beaker shall provide for the difference in volume between nominal capacity and overall capacity.

The capacity of the beaker is determined by one of the following relationships, either

— the overflow capacity of a beaker shall exceed the nominal capacity by 10 %, or

— the distance between the levels corresponding to the nominal and overflow capacities shall be not less than 10 mm.

Whichever of these two relationships produces the greater differential in capacity shall apply.

6 Material

6.1 General

Beakers shall be made of borosilicate glass of suitable chemical and thermal properties, preferably of borosilicate glass 3.3 in accordance with ISO 3585.

The glass shall be free from visible defects and from internal stress which would impair the performance of the beaker.