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Plastics laboratory ware — Graduated measuring cylinders

Matériel de laboratoire en plastique — Éprouvettes graduées cylindriques

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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 6706 was developed by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus*, and was circulated to the member bodies in October 1979.

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

Australia	Italy	Romania
Brazil	Korea, Rep. of	South Africa, Rep. of
Canada	Libyan Arab Jamahiriya	Spain
France	Mexico	United Kingdom
Germany, F. R.	Netherlands	USSR
Hungary	Poland	
India	Portugal	

No member body expressed disapproval of the document.

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Plastics laboratory ware — Graduated measuring cylinders

1 Scope and field of application

This International Standard specifies requirements for a series of plastics cylinders having a graduated volumetric scale and a pouring spout.

NOTE — Cylinders may also be provided with two scales.

2 References

ISO 384, *Laboratory glassware — Principles of design and construction of volumetric glassware*.

ISO 649/2, *Laboratory glassware — Density hydrometers for general purposes — Part 2 : Test methods and use*.¹⁾

IEC Publication 335/1, *Safety of household and similar electrical appliances — Part 1 : General requirement*.

3 Basis of adjustment

3.1 Unit of volume

The unit of volume shall be the cubic centimetre (cm³), for which the name millilitre (ml) may be used.

NOTE — The term millilitre (ml) is commonly used as a special name for the cubic centimetre (cm³), in accordance with the International System of Units (SI).

3.2 Reference temperature

The standard reference temperature, i.e. the temperature at which the cylinder is intended to contain its nominal volume (nominal capacity), shall be 20 °C.

NOTE — When the cylinder is required for use in a country which has adopted a standard reference temperature of 27 °C (the alternative recommended in ISO 384 for tropical use), this figure shall be substituted for 20 °C.

4 Series of nominal capacities

The series of nominal capacities of graduated measuring cylinders shall be as shown in table 1.

Table 1 — Series of capacities, divisions and tolerances

Nominal capacity	Smallest division	Maximum permitted error	Maximum ungraduated capacity at base
ml	ml	ml	ml
10	0,1	± 0,1	1
10	0,2	± 0,2	1
25	0,5	± 0,5	2,5
50	1	± 1	5
100	1	± 1	10
250	2	± 2	24
500	5	± 5	50
1 000	10	± 10	100
2 000	20	± 20	200
4 000	50	± 50	400

5 Definition of capacity

The capacity corresponding to any graduation line shall be defined as the volume of water at 20 °C, expressed in millilitres, contained by the cylinder at 20 °C when filled to that graduation line in accordance with the procedure given in clause A.1 of annex A.

NOTE — Where, exceptionally, the reference temperature is 27 °C, this value shall be substituted for 20 °C.

6 Accuracy

There shall be one class of accuracy.

When tested in accordance with annex A, the errors in capacity shall not exceed the maximum permitted errors shown in table 1. The error represents the maximum permissible error at any point and also the maximum permissible difference between the errors at any two points.

1) At present at the stage of draft. (Revision of ISO/R 649.)