

# International Standard



# 7057

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## Plastics laboratory ware — Filter funnels

*Matériel de laboratoire en plastique — Entonnoirs pour filtration*

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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.

International Standard ISO 7057 was developed by Technical Committee ISO/TC 48, *Laboratory glassware and related apparatus*, and was circulated to the member bodies in May 1980.

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

|                     |                |                       |
|---------------------|----------------|-----------------------|
| Australia           | Hungary        | Romania               |
| Brazil              | Italy          | South Africa, Rep. of |
| Czechoslovakia      | Korea, Rep. of | Spain                 |
| Egypt, Arab Rep. of | Mexico         | United Kingdom        |
| France              | Netherlands    | USSR                  |
| Germany, F. R.      | Poland         |                       |

The member body of the following country expressed disapproval of the document on technical grounds :

India

# Plastics laboratory ware — Filter funnels

## 0 Introduction

This International Standard has been prepared to align the requirements for plastics filter funnels with those for glass filter funnels which will form the subject of ISO 4798. In both cases, the requirements have been based on the sizes of filter papers currently available, i.e. diameters 55 — 70 — 90 — 110 — 125 — 150 — 185 and 240 mm.

Differences between the requirements for plastics and glass filter funnels have been limited, as far as possible, to those arising from the differences in physical properties of the respective materials used in their construction.

The requirements are applicable to filter funnels intended for use with aqueous solutions at temperatures between 0 and 60 °C. Before using these filter funnels for strong acids and alkalis, oxidizing agents or non-aqueous liquids, or at temperatures outside this temperature range, users should satisfy themselves that the filter funnels are suitable for such applications either by laboratory tests or by reference to the manufacturer or supplier. Plastics filter funnels complying with the requirements of this International Standard are marked both with a recommended maximum temperature of use and an indication of the material of construction.

## 1 Scope and field of application

This International Standard specifies requirements for six preferred sizes of plastics filter funnels up to 200 mm in diameter suitable for laboratory use.

## 2 Sizes

The preferred sizes of filter funnels are defined by their internal bowl diameters as follows :

35 — 55 — 75 — 100 — 150 and 200 mm.

The tolerance on diameter shall be  $\pm 5\%$ .

General designs of filter funnels are shown in the figure.

## 3 Material

### 3.1 General

Filter funnels shall be rigidly constructed of generally non-brittle plastics material of suitable chemical and thermal properties, and shall be as free as possible from moulding defects and stress.

### 3.2 Resistance to extraction of ionic material by water at 60 °C

When tested by the method specified in annex A, the funnel shall give an aqueous extract free of suspended matter, and having a conductivity not more than 200  $\mu\text{S/m}$  greater than that of the original water used for the extraction.

NOTE — 200  $\mu\text{S/m}$  is equivalent to the conductivity of water containing approximately 1 mg/l of sodium chloride.

## 4 Dimensions

The dimensions of the preferred sizes are given in table.

Table

Dimensions in millimetres

| Internal bowl diameter                      | 35 | 55 | 75 | 100 | 150 | 200 |
|---------------------------------------------|----|----|----|-----|-----|-----|
| Maximum external diameter at top of stem    | 9  | 11 | 13 | 17  | 22  | 30  |
| Minimum internal diameter at bottom of stem | 4  | 4  | 4  | 6   | 8   | 10  |

## 5 Construction

**5.1** The filter funnel shall consist of a bowl having the shape of a frustum of a right circular cone, and a stem which shall be coaxial with the cone.

**5.2** The inner wall of the bowl shall diverge from the axis so as to give an included angle of  $60_{-3}^{+0}$  degrees.

**5.3** The bowl shall have a flanged rim for rigidity.