

Specification for

Dual-scale and ovulation clinical maximum thermometers (mercury-in-glass, enclosed scale)

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Laboratory Apparatus Standards Policy Committee (LBC/-) to Technical Committee LBC/4, upon which the following bodies were represented:

- British Laboratory Ware Association
- British Medical Association
- Department of Health and Social Security
- Department of Trade and Industry (National Physical Laboratory)
- Institute of Petroleum
- Medical Sterile Products Association
- Ministry of Defence
- Scientific Glassware Association

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
1 Scope	1
2 Temperature scales	1
3 Type of thermometer	1
4 Scale ranges and scale interval	1
5 Materials	2
6 Manufacture	3
7 Scale lines and numbering	3
8 Maximum permissible errors	4
9 Dimensions	4
10 Influence of immersion time	4
11 Inscriptions	5
12 Accompanying slip	6
Appendix A Determination of the average zero point depression	7
Appendix B <i>Deleted</i>	
Appendix C <i>Deleted</i>	
Figure 1 — General design of enclosed-scale clinical thermometers	2
Figure 2 — Examples of preferred style of scale lines and numbering	4
Table 1 — Requirements for thermometer types	5
Table 2 — <i>Deleted</i>	
Publications referred to	9

Foreword

This British Standard has been prepared under the direction of the Laboratory Apparatus Standards Policy Committee.

Requirements for mercury-in-glass clinical maximum thermometers of the enclosed-scale type, excluding the normal thermometer for general use, are given in this British Standard as amended by Amendment No. 1.

Quality levels are also established for enclosed-scale ovulation and dual-scale (Celsius and Fahrenheit) thermometers.

In the UK it is customary to use a blue glass bulb or blue mark to identify thermometers intended for rectal use, and this is specified as a requirement in this British Standard.

Requirements for normal thermometers for general use are specified in BS EN 12470-1.

Requirements for solid-stem clinical maximum thermometers, excluding the normal thermometer for general use, are specified in BS 691.

Measuring period. The terms “½min” or “1 min” are sometimes used to distinguish the different sizes of bulbs of clinical thermometers not made in accordance with this British Standard. Experience has shown that these terms bear no relation to the actual time required for the thermometer to take up the deep body temperature; this time depends on the physical condition of the patient, the skill with which the thermometer is placed in position, the initial temperature of the thermometer and other factors.

For this reason, no “measuring period” indication is permitted on British Standard clinical thermometers. To avoid possible misunderstanding on this point, it is specified that a printed slip which includes the explanatory wording given in clause 12 shall accompany every British Standard clinical thermometer (except those supplied in bulk to hospitals and similar institutions).

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 9, and a back cover.

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1 Scope

This British Standard specifies requirements for two types of mercury-in-glass clinical maximum thermometers of the enclosed-scale type, intended for the measurement of deep body temperature of human beings.

The types are as follows:

- a) ovulation thermometers;
- b) dual-scale (i.e. Celsius and Fahrenheit) thermometers for general use.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Temperature scales

The thermometers shall be graduated in accordance with the Celsius scale as defined in the current definition of the International Temperature Scale adopted by the General Conference of Weights and Measures (CGPM).

The dual-scale thermometers shall, in addition, be graduated in accordance with the Fahrenheit scale.

3 Type of thermometers

The thermometers shall be of the mercury-in-glass type with the scale marked on a scale panel fixed longitudinally behind the capillary tube. The capillary tube and the scale panel shall be enclosed in a transparent tube impermeably fixed to the bulb and forming a protective sheath. The general design is shown in Figure 1.

The thermometers shall be provided with a maximum reading device that prevents the mercury column from falling when the mercury in the bulb returns to the surrounding temperature.

4 Scale ranges and scale intervals

4.1 Scale ranges

The scale ranges shall not exceed the ranges specified in Table 1 and shall include scale lines at the temperatures specified in Table 1, for the thermometer type concerned.

4.2 Smallest scale divisions

The smallest scale divisions shall be as specified in Table 1 for the thermometer type concerned.

4.3 Linear scale equivalent

The distance representing 1 °C on the scales shall be not less than the lengths specified in Table 1 for the thermometer type concerned.