

Re-usable hypodermic syringes for insulin injection —

**Part 1: Specification for syringes for use
with insulin of strengths 20, 40
and 80 units per millilitre**

Co-operating organizations

The Surgical Instruments and Medical Appliances Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and professional and industrial organizations:

- Admiralty*
- Air Ministry*
- Association of Hospital Matrons*
- British Dental Association*
- British Medical Association*
- British Paediatric Association
- British Surgical Trades Association, Inc.*
- Federation of British Rubber and Allied Manufacturers
- Institute of British Surgical Technicians
- Medical Defence Union*
- Medical and Dental Defence Union of Scotland
- Medical Protection Society
- Ministry of Agriculture, Fisheries and Food
- Ministry of Health*
- Queen's Institute of District Nursing
- Royal College of Midwives
- Royal College of Nursing*
- Royal College of Obstetricians and Gynaecologists
- Royal College of Physicians of London
- Royal College of Surgeons of Edinburgh
- Royal College of Surgeons of England*
- Royal College of Veterinary Surgeons
- Royal Faculty of Physicians and Surgeons of Glasgow
- War Office*

The Government departments and professional and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

- Association of Clinical Pathologists
- British Dental Manufacturers' Association
- British Diabetic Association
- British Iron and Steel Federation
- British Veterinary Association
- Faculty of Anaesthetists
- Glass Manufacturers' Federation
- High Commission of India
- National Federation of Hospital Officers
- Surgical Needle Manufacturers' Association

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Foreword

This standard makes reference to the following British Standard:

BS 3930, *Conical fitting with 6 per cent taper (Luer) for hypodermic and other surgical equipment*.

BS 1619, *Re-usable hypodermic syringes for insulin injection — Part 2: Specification for syringes for use with insulin of strength 100 units per millilitre*¹⁾.

This Part of BS 1619 is restricted to requirements for insulin syringes for the injection of insulin of strengths 20, 40 and 80 units per millilitre. Requirements for syringes for use with insulin of strength 100 units per millilitre are given in BS 1619-2. As before, the specification deals with all-glass and metal-and-glass hypodermic syringes having the Luer conical fitting. Provision is now made that metal-and-glass hypodermic syringes may have a glass or ceramic piston as an alternative to metal pistons. A change has also been made in the test for leakage of the conical tip when fitted to a needle in order to make the test more realistic in terms of present requirements. Overall and other relevant dimensions for insulin syringes are specified in order to provide basic data for the design of a carrying case.

The principal change in the revised edition of this standard is that, with the approval of the British Diabetic Association, the 2 ml size of syringe has superseded the 1.5 ml size, although scale intervals of 0.05 ml have been retained.

The Luer conical fitting (6 per cent taper) is specified in uniformity with other British Standards for hypodermic equipment. After careful consideration of other types of conical fittings, the technical committee responsible for the preparation of this specification is unanimous in its opinion, implemented in the 1950 edition, that the Luer conical fitting be recommended for general adoption in the United Kingdom as the standard hypodermic fitting on the grounds of the greater strength of the syringe nozzle and the more effective grip attained between the conical tip of the syringe and the needle mount as compared with other fittings.

Attention is drawn to the work on the standardization of conical fittings (6 % taper) presently under consideration by Technical Committee ISO/TC 84, Syringes for medical use and needles for injection, of the International Organization for Standardization (ISO) of which the UK is an active member. It is expected that the ISO standard resulting from this work will contain dimensional requirements similar to those of BS 3930 and that the standard, when published by ISO, will be accepted by the UK and published as a dual-numbered British Standard to supersede BS 3930.

The dimensions specified for the Luer conical fitting make the conical tip of the syringe suitable for use with hypodermic needles complying with the American Federal Specification GG-N-196 Needles, hypodermic: for Luer syringes.

British Standards for hypodermic equipment include:

BS 1263, *Hypodermic syringes for general medical use (Luer fitting)*.

BS 2983, *Hypodermic dental needles*.

BS 3522, *Hypodermic surgical mounted needles (Luer fitting)*.

BS 3930, *Conical fittings with 6 per cent (Luer) taper for hypodermic and other surgical equipment*.

Certification. It is strongly recommended that, in view of the nature of this specification, manufacturers and purchasers should make use of the certification facilities described on the inside back cover of this standard. In view of the stipulations of the certification scheme this standard, besides being most useful to purchasers of large consignments from a given manufacturer, can also provide an equal level of confidence to purchasers of smaller quantities if the manufacturer is licensed to use the Kitemark.

¹⁾ Referred to in the foreword only.

NOTE In place of the customary, but incorrect, use of the pound and kilogramme as units of force, the units called pound-force (abbreviation lbf) and kilogramme-force (abbreviation kgf) have been used in this standard. These are the forces which, when acting on a body of mass one pound or one kilogramme respectively, give it an acceleration equal to that of standard gravity.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 6, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.