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Manual of basic techniques for a health laboratory, 2nd edition

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The first edition of this manual was published in 1980. This new edition updates many of the procedures and techniques that have become obsolete in the intervening period. The authors set out to produce a manual that could be used as a basic tool by technicians working in medical laboratories in small or medium-sized hospitals or in dispensaries attached to rural health centres in developing countries. They have achieved their goal.

The manual is easy to read and, while in the words of the authors, purposefully not full of complex terminology, it provides good definitions and explanations of the procedures at a level that enables laboratory technicians to understand the principles behind the test concerned, the reason the test has been requested, and the basic interpretation of its results.

Following a brief introduction, the book consists of three parts, which provide detailed descriptions of methods for carrying out the procedures covered. There follow an annex, which lists reagents and how to prepare them, and finally a very complete index.

The introduction includes useful background information on how to use the manual, an excellent explanation of SI units, how they are derived, and how they apply to laboratory medicine.

Part I consists of two sections. The first (Setting up a peripheral health laboratory) provides technicians with all the information they will need for this task, including basic floor plans for a laboratory, comprehensive information on electricity sources for powering equipment, basic electrical and plumbing maintenance procedures, and lists of essential equipment. The second

section (General laboratory procedures) has good coverage of, among other topics, use and maintenance of microscopes and laboratory balances, disinfection and sterilization procedures, disposal of laboratory waste, dispatch of specimens to a reference laboratory, and laboratory safety. Quality assurance is also dealt with briefly.

Part II has separate sections covering the basic test procedures that are carried out in peripheral health laboratories: parasitology (e.g., intestinal protozoa, intestinal helminths, techniques for concentrating parasites, chemical tests); bacteriology (e.g., staining techniques, microscopic examination techniques); and mycology.

Examination and collection of urine and cerebrospinal fluid specimens, basic procedures in haematology and blood chemistry, and immunological and serological techniques are covered in Part III.

All the methods covered in the manual are given in detail, with all the information required to carry them out, including descriptions of the reagents, equipment and controls used.

The 19-page annex lists alphabetically all the reagents referred to in the text and gives detailed descriptions of how to prepare them. This section would have been enhanced by inclusion of a list of reputable manufacturers of the chemicals, laboratory reagents and

controls used in the various procedures described.

The manual is rounded off by an excellent index, which makes it very easy to find the details on any of the procedures, reagents, equipment or other information provided.

It is well illustrated throughout with numerous black and white drawings but it does not include any colour prints. If the reason for this is that their inclusion would add significantly to production costs, it would be useful for future editions to include a bibliography listing wallcharts and other publications that contain colour photographs relevant to the techniques detailed in the manual.

The manual does not cover blood bank technology, which is odd, as most health laboratories would be required to perform some blood grouping and possibly even cross-matching of blood, albeit only in emergencies. It would therefore have been useful if it had included cross-references to methods for these techniques that would be appropriate for technicians working in basic laboratories.

Over all, this is an excellent manual that be welcomed as a very useful working tool by laboratory technicians working in small laboratories, not only those in developing countries. ■

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