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BOOK REVIEWS

BENTLEY'S TEXTBOOK OF PHARMACEUTICS. 7th Edition. By Harold Davis. Pp. xiii + 1091 (including 309 illustrations and Index). Baillière, Tindall and Cox, London, 1961. 52s. 6d.

Bentley's Textbook of Pharmaceutics has been a standard reference book on pharmacists' bookshelves for over 35 years and during that time has been the vade mecum of countless pharmacy students.

In his preface to the first edition. Bentley remarked that no book had then been published on this aspect of the training of a pharmacist. It now seems remarkable that the whole field of Pharmaceutics should be included within the covers of one volume. The fact that the book is now in its seventh edition shows that it is in demand and that there is a need for frequent revision; this revision would surely be simplified if the work were in three or four volumes. In this manner justice would be done to each section of the subject.

The present edition has been extensively revised by Dr. Davis in co-operation with academic and industrial specialists who have been able to effect the revision with only a slight increase in the overall size. A new section on Radio-activity is included and there is a very welcome chapter on Containers and Packaging. Certain rearrangements have also been effected although they do not always assist in the use of the book. Containers, preservatives and incompatibilities which are dealt with in widely separated sections are all facets of the one problem —*formulation*—which warrants a complete section of its own. Similarly eye drops and eye lotions (neither of which appear in the index) should not be separated by 80 pages.

The introduction of a specific section on Unit Dosage Forms for Oral use is welcome but it seems a pity that it is restricted to tablets and capsules. Pills and cachets are dealt with elsewhere, the former occupying almost as much space as tablets; some of this space could well have been devoted to delayed action formulations and the associated processes for producing them.

The present edition contains an increased number of line diagrams which are most helpful, but there is still a need for further diagrams—the two illustrations of a steamer which appeared in the first edition might well be replaced by diagrams of an ethylene oxide steriliser, pre-vacuum autoclave system and spray cooling autoclave for bulk injections. Although there are five pictures of tablet machines there is none which illustrates how a simple tablet machine works.

The authors are to be congratulated in having placed between the covers of one book the present state of a rapidly developing subject and the publishers have done well to produce it so well at a very reasonable price. The above comments are made in the hope that they will help to keep this important work abreast with modern trends.

The inclusion of an increased number of references to other works and to original publications is very commendable, but the usefulness of "Bentley" as a book of reference could be enhanced by the amplification of its own index.

J. C. PARKINSON.

THE CHROMATOGRAPHY OF STEROIDS. By I. E. Bush. Pp. xxi + 437 (including Index). Pergamon Press, Oxford, 1961. 80s.

Chromatography has revolutionised biochemistry probably more than any other technique. The isolation, identification and structural analysis of complex substances are particularly impressive in the steroid field and whether the interest be in biosyntheses, metabolism or analysis of steroids the use of chromatographic methods is inevitably now involved. This comprehensive monograph on the chromatography of steroids will therefore be highly valued by all workers in the field. And yet, not by them only, for Professor Bush, who has contributed so much technically to methods for solution of particular problems has also delved deeper into the methodology. He has demonstrated the relevance in the steroid field of the general theory and background of partition chromatography built up with other families of organic compounds and has thereby demonstrated the ideal nature of steroids as a group for the study of the general theory of chromatographic behaviour. This monograph therefore contains a great deal of interest to biochemists and chemists generally. By drawing on work on fatty acids, flavonoids, sugars and amino-acids to demonstrate general principles underlying technical details of chromatographic work with steroids, he has also emphasised in consequence the relevance of progress in the chromatography of steroids to applications of the technique in other fields. His demonstrations of the quantitative treatment of steroid behaviour on chromatograms in typical and atypical solvent systems and his tables of, and calculations with, R_F and R_M values are illustrative of their potentiality in other fields. While basic theory and general principles provide the framework and the structure of this monograph, practical aspects are also fully discussed. Techniques and apparatus are described in most interesting detail, and include the preparation of extracts of animal tissues, blood and plasma, sweat, faeces and urine for chromatography with details of some typical analytical problems of steroid biochemistry. Appendices include notes on the purification of reagents and materials, on methods of detection and personally checked details of microchemical reactions for steroids. The systematic investigation of unknown steroids is described and future developments are envisaged. If indeed precise analytical details are not provided for the detection and limitation of any foreign steroid or steroid intermediate in any particularly important steroid, the basis for approaching the problem and determining whether it is capable of solution by chromatographic means is largely provided, though special problems arising from the development and use of variously substituted fluoro-derivatives may require additional experimental study. The importance of colour reactions, fluorescence and spectroscopy are carefully considered and their importance recognised but properly their limitations are also noted and underline the need to consider them in conjunction with, and not in substitution for, chromatographic properties. Perhaps in some respects the special value of infra-red spectroscopy of the steroids may seem, in consequence, to be unintentionally under-represented. Chromatography, however, remains the technique of major importance in the isolation and separation of steroids and has contributed greatly to our understanding of metabolism and steroid transformations. This monograph will help and encourage many to contribute still further knowledge.

FRANK HARTLEY.