BOOK REVIEWS

THE QUANTITATIVE ANALYSIS OF DRUGS, by D. C. Garratt. Second edition. Pp. xv + 670. Chapman and Hall, London, 1955. 70s.

The first edition of this book was published in 1937 under the title of *Drugs and Galenicals: Their Quantitative Analysis*. Since that date many changes have occurred in pharmacy and some of these changes are reflected, in the work under review, by the inclusion of new sections dealing with synthetic organic chemicals and by the deletion of the word "Galenicals" from the original title. It was stated, in the first edition, that the author had relied mainly on his own collection of notes and references collected during his analytical experience; it was, in fact, this which gave the work much of its practical value. The new edition has been awaited for some time and it is of interest to see how far, after a period of 18 years, the original practical approach to the subject could be maintained in the much wider field of present day pharmaceutical analysis.

The general arrangement of the first edition has been retained, a substance, its salts, similar compounds, and preparations containing the substance, being grouped together. Thus barbiturates are listed and described as a group, as are the sulphonamides, sugars, soaps, paraffins, flavines, and compounds containing mercury. New sections have been added where necessary and those describing the penicillins and soapless detergents are particularly informative. The appendices to the original volume have been enlarged and new additions include an account of titration in non-aqueous solvents and a review of physical methods of analysis.

In describing the various methods of assay available for a substance or group of substances, the author clearly states the alternative methods available and gives reasons for his final choice. For many official B.P. or B.P.C. assays, points of practical analytical detail from the author's experience are given which will greatly assist any newcomer to the method.

Few criticisms can be made and a preliminary reading did not show any typographical errors. If one wished to be hypercritical the choice and exclusion of certain substances might be queried. Thus a monograph on solapsone is included but not one on cyanocobalamin; mephenesin and chloramphenicol have also been omitted and future editions might well include a separate section on the antihistamines. These points however, do not detract from the value of the book but serve to emphasize the rapid changes which now occur in the contents of official volumes.

The book is attractively produced and bound, and well indexed. It can be stated that the author has, in fact, maintained his original standard, resulting in a practical handbook and reference work which will be essential for any laboratory engaged in pharmaceutical analysis.

R. E. STUCKEY.

METHODEN DER ORGANISCHEN CHEMIE (Houben-Weyl). Volume III, Part 2. Physikalische Forschungsmethoden. Fourth Edition. Edited by Eugen Müller. Pp. xxviii + 1078 (including 507 illustrations and Index). Georg Thieme Verlag, Stuttgart, 1955. Moleskin Dm.186.00.

This latest volume of the new fourth edition of Houben-Weyl is the second of two which are to be devoted to physical methods, and deals solely with electrical, optical, magnetic and acoustic analytical methods. The layout of this book

follows the now usual pattern with detailed monographs each by a specialist on the major subdivisions of the subject. Included are chapters on the measurement of pH; potentiometric and conductimetric titrations; redox potentials; polarography; dielectric constants; refractometry; polarimetry; fluorescence; phosphorescence; electron microscopy; X-ray crystallography; visible, ultraviolet, infra-red and Raman spectroscopy; microwave spectroscopy; magnetic methods and ultrasonics. The theory of pH is presented, as was to be expected, from the standpoint of the Lowry Brønsted theory of acids and bases, so that such sections as those on the measurement of pH in non-aqueous media, Hammet acidity functions and indicator theory, fall naturally into place. On the experimental side, the description of apparatus and methods for the measurement of pH and redox potentials, and for conductimetric and potentiometric titration is given, as in all these volumes, in a wealth of detail. These descriptions are often quite sufficient in themselves for the average worker to establish the necessary technique without further reference, but, as always, in addition full reference to original literature is also included. By comparison the single chapter on the polarography of organic compounds is a little disappointing. Much of it has been devoted to general theory and the description of apparatus which, although excellently presented in itself, is general to all polarographic work, whilst what appears to the reviewer as the real purpose of the chapter has been relegated to the last few pages. As may be expected, a large section of this volume has been allocated to the theory and practice of light absorption measurements. Especially welcome here is the chapter on Raman spectra which are, of course, complementary to the infra-red and for which few volumes of this type provide adequate treatment. The tabulation of solvents suitable for infra-red measurements in various ranges of the spectrum provides a useful collection of information, whilst the collection and diagramatic representation of absorption data for the various functional groups is a valuable addition. The inclusion of examples of the use of infra-red spectra in the determination of organic structures greatly enhances the value of this section. The newer techniques of micro-wave spectroscopy and ultrasonics are also briefly described. The volume is remarkably free from misprints, beautifully finished, and although part of a large series can be seriously entertained as a work, complete in itself, which will be of value both to the specialist and the routine analyst.

J. B. STENLAKE.

LETTER TO THE EDITOR

Thiambutene and Barbiturate Anæsthesia in the Dog

SIR,—I regret and apologise for certain errors in doses which occur in the article "Thiambutene and Barbiturate Anæsthesia in the Dog," published in this Journal 1955, **7**, pp. 533–540. In all cases subcutaneous doses of thiambutene were 22 mg./kg. and intravenous doses 4·4 mg./kg. Intravenous doses of nalorphine were 2·2 mg./kg.

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