

data involving hydroalcoholic solutions such as elixirs which have been buffered with polyfunctional acids.

(1) S. Siggia, "Quantitative Organic Analysis via Functional Groups," 3rd ed., Wiley, New York, N. Y., 1963, p. 140.

(2) T. Higuchi, S. O. Eriksson, H. Uno, and J. J. Windheuser, *J. Pharm. Sci.*, **53**, 280(1964).

(3) T. Higuchi, A. Shah, T. Miki, and A. Herd, *J. Am. Chem. Soc.*, **85**, 3655(1963).

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Books

REVIEWS

Amphetamine Abuse. Edited by J. ROBERT RUSSO. Charles C Thomas, Springfield, IL 62703, 1968. xii + 159 pp. 16 × 23.5 cm. Price 7.50.

This 159-page book is made up of the edited papers of the first National Institute on Amphetamine Abuse which resulted from a Delinquency Study and Youth Development Project of Southern Illinois University. It was funded from a grant awarded by the Office of Juvenile Delinquency and Youth Development, United States Department of Health, Education, and Welfare and held during February, 1966. One finds contained within this volume the various viewpoints of law enforcement, the drug industry, the sociologist, the psychiatrist, and medical researcher, and finally the interesting experience of a young amphetamine abuser himself.

Although no attempt was made to correlate the contradictions of opinions expressed, the book stands as a good example of the complex spectrum of this social problem. It covers the topics of use, misuse and abuse; psychiatric implications; violations; law enforcement problems; and the important role of education.

The reviewer can only reiterate the cover leaf description of the book which states that an educator predictively recommends education as a preventative, a member of the Narcotics Bureau pleads for stronger laws and greater police freedom in enforcement and so on. Hence, this book represents a forum for viewpoints from the various establishments affected by the amphetamine abuse problem, but does not cogently and coherently express ways to solve the problem. However, the book does clarify much confusion in this area, it provides some lines of communication and it will help provide some basis for future legal, medical, and moral decisions about amphetamine abuse.

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Non-Specific Factors in Drug Therapy. Edited by KARL RICKELS. Charles C. Thomas, 301-327 East Lawrence Ave., Springfield, IL 62703, 1968, xii + 149 pp. 16 × 23.5 cm. Price \$7.75.

This symposium volume is derived from a session of the 4th World Congress of Psychiatry held in 1966. Nonspecific (*i.e.*, nondrug) factors are considered particularly as they relate both to pharmacologic treatment of depressions, neuroses, and schizophrenia, and to the psychopharmacologic effects of various drugs in normal subjects. Major nonspecific variables affecting drug therapy are grouped

as characteristics of patient, physician, treatment milieu, and non-treatment milieu. Examples of many nonspecific factors considered are attitudes of patient and physician (optimistic or pessimistic) toward drug treatment, personality characteristics of patients (or normals), duration as well as intensity of emotional disturbance being treated, and prior drug experiences. The relationship of such factors to side effects and paradoxical responses as well as to therapeutic success of drug treatment is examined.

Various nonspecific influences of psychological and sociocultural characteristics are discussed at length by several contributors in relation to the phenomena associated with placebo treatment including the controversial concept of "placebo reactors." While one chapter emphasizes the significance or "power" of the placebo and our knowledge of its relative effectiveness according to the varied circumstances, another chapter emphasizes the lack of knowledge on the true incidence of the placebo reactions and on the longitudinal consistency of the supposed "placebo reactor" characteristic. Certainly all agree to the need for further clarification of placebo phenomena and for enlarged and enlightened use of placebos in clinical drug studies.

Designed "to provide the reader with some of the latest findings and thoughts" in an interesting and significant area of psychopharmacology, the volume accomplishes this objective reasonably well. It will be most useful to those with some previous awareness of the subject and to those who will make use of the good selection of bibliographic citations included to pursue their interest among important earlier works.

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Autoxidation of Hydrocarbons and Polyolefins: Kinetics and Mechanisms. By LEO REICH and SALVATORE S. STIVALA, Marcel Dekker, Inc., 95 Madison Ave., New York, NY 10016, 1969. xi + 527 pp. 15.5 cm. × 23.5 cm. Price \$29.75.

This book deals primarily with the kinetics and mechanisms of hydrocarbon and polyolefin autoxidation. Following a brief account of some early historical developments, Chapter 1 gives a clear, concise treatment of the general kinetics of free radical reactions. Chapter 2 covers the autoxidation of hydrocarbons in the absence of inhibitors and accelerators while Chapters 3 and 4 deal with simple hydrocarbon autoxidation in the presence of antioxidants and metal catalysts, respectively. The topic of weak chemiluminescence during hydrocarbon autoxidation is presented in Chapter 5,

and the qualitative and quantitative aspects of autoxidation of saturated polyolefins are dealt with in Chapters 6 and 7, respectively. The final chapter is devoted to the investigation of polyolefin autoxidation by various techniques.

The arrangement and sequence of the subject matter is well organized and allows even the nonexpert to follow the kinetics without too much difficulty. There is an abundance of reaction rate equations which although essential for kinetic studies would appear to be overexcessive. There are also numerous chemical equations for the various autoxidation schemes. The problems given at the end of some chapters are adequate, being fairly difficult and of good variety and these should prove stimulating and challenging to the graduate student or research worker specializing in this field. However, I feel that answers to the numerical problems should have been provided and these would be most helpful to the student. The rate constants compiled in the various tables will prove to be a most useful feature to research workers in this field. The bibliography is up-to-date, covering the literature up to 1967. However, the inclusion of reference to private communication and unpublished work in a textbook is undesirable and meaningless. Several of the figures are very poorly drawn and detract from the quality of the book. The authors should have been able to reproduce the figures from the original papers. To sum up, the book can be highly recommended to the advanced graduate student and the specialist in this field who will find a wealth of material gathered together in a single book.

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Purification of Inorganic and Organic Materials: Techniques of Fractional Solidification. Edited by MORRIS ZIEF. Marcel Dekker, Inc., 95 Madison Ave., New York, NY 10016, 1969. xvii + 318 pp. 15 × 23 cm. Price \$17.75.

An earlier volume edited by Zief and Wilcox, entitled "Fractional Solidification," brought together for the first time the basic principles, apparatus, and applications of all types of solid-liquid processes associated with ultra-purification of chemical compounds. The volume here reviewed is a logical sequel inasmuch as it presents reliable methods for the preparation and analysis of such compounds. The choice of the methods presented admittedly reflects the interests of the author, however, they are described by experts in the respective areas and were chosen on the basis of originality, reproducibility, and adaptability to problems normally encountered in the laboratory. Contributing authors represent a broad distribution of research laboratories, both foreign and domestic.

Part I of the book concerns the description of analytical methods for ultra-pure compounds, including a variety of spectral techniques, thermal methods, electrochemical and gas-liquid chromatographic procedures. Part II describes in detail the most useful methods available for zone melting, progressive freezing and column crystallization. Particularly unique are the chapters describing rapid purification of organic compounds, purification in kilogram quantities, zone melting chromatography, and the concentration of flavors at low temperature.

As though in answer to the question of how one maintains the integrity of an ultrapure compound, Part III presents, in a single chapter, a discussion and tabulation of data concerning containers for pure substances. Quite interesting is the fact that polyfluoro-carbons compare most favorably with quartz and borosilicate as acceptable container materials.

While they ought to be, at least for pharmacological evaluation and for reference standards, medicinal compounds are not subjected to ultrapurification. The book under review presents considerations which are applicable to some organic medicinal compounds, if and when it should be desirable to render them ultrapure.

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Acetylenes and Allenes: Addition, Cyclization, and Polymerization Reactions. By THOMAS F. RUTLEDGE. Van Nostrand Reinhold Company, 450 West 33rd St., New York, NY 10001, 1969. xvi + 432 pp. 23.4 × 15.6 cm. Price \$21.50.

Adrenergic Neurotransmission. (Study Group #33), Edited by G. E. W. WOLSTENHOLME and MAEVE O'CONNOR. Little, Brown and Company, 34 Beacon St., Boston, MA 02106, 1969. x + 123 pp. 12.5 × 18.9 cm. Price \$4.50.

Amino Acides Peptides Proteines. Cahier No. 6. Edited by MAURICE VIGNERON. AEC Societe de Chimie Organique et Biologique, 24, Avenue de l'Opera, Paris 1^{er}, France, 1966. 457 pp. 21 × 26.7 cm.

Antibiotike-Fibel—Antibiotika und Chemotherapie. By M. PLEMPER and H. OTTEN. Georg Thieme Verlag, 7 Stuttgart 1, P.O. Box 732, Gerdweg 63, Germany, 1969. xl + 994 pp. 15.5 × 23 cm. Price DM 98,-.

Behavior of Enzyme Systems. 2nd Edition. By JOHN M. REINER. Van Nostrand Reinhold Company, 450 West 33rd St., New York, NY 10001, 1969. xviii + 345 pp. 15.5 × 23.5 cm.

British National Formulary 1968. Published jointly by the British Medical Association and the Pharmaceutical Society of Great Britain, The Pharmaceutical Press, 17 Bloomsbury Square, London, W.C.1, England, 1968. 384 pp. 10.7 × 17.2 cm. Price 13s.6d plus postage.

British Pharmaceutical Codex 1968. Edited by S. C. JOLLY. The Pharmaceutical Press, 17 Bloomsbury Square, London, W.C.1, England, 1968. U. S. Distribution: Rittenhouse Book Store, Philadelphia, Pa. xxxvii + 1513 pp. 15 × 22.3 cm. Price \$19.50.

Degradation of Herbicides. Edited by P. C. KEARNEY and D. D. KAUFMAN. Marcel Dekker, Inc., 95 Madison Ave., New York, NY 10016, 1969. xi + 394 pp. 15.7 × 23.6 cm. Price \$18.75.

Die Interkantonale Vereinbarung über die Kontrolle der Heilmittel vom 16. Juni 1954. By FELIX WUST. Kommissionsverlag Herbert Lang & Cie AG Bern, Switzerland, 1969. 368 pp. 15.5 × 22.5 cm. Price 3 fr./Dm 52.—.

Index Nominum 1966, Supplementum 1968. Edited by Laboratory of the Swiss Pharmaceutical Society. Swiss Pharmaceutical Society, Marktasse 52, 3011 Bern, Switzerland 1969. 120 pp. 17 × 24 cm. Price Sw. fr. 35.—plus postage.

Medicaments Organiques de Synthèse. Vol. I. Edited by GUILLAUME VALETTE. Masson Et C^{ie}, Editeurs, 120, Boulevard Saint-Germain, Paris VI^e, France, 1969. 226 pp. 15.4 × 22 cm. Price 88 fr.

Methods of Biochemical Analysis. Vol. 17. Edited by DAVID GLICK. Interscience Publishers. Div. of John Wiley & Sons, Inc., 605 Third Ave., New York, NY 10016, 1969. vi + 428 pp. 15.5 × 23.4 cm. Price \$16.50.

Pharmaceutical Chemistry Part II. Inorganic Vol. 1. By M. L. SCHROFF. National Book Centre P-76, Dr. Sundari Mohan Ave., Calcutta, 14, India, 1968. v + 700 + xvi pp. 14.5 × 22.2 cm. Price \$10.00.

Pharmacological Research Communications. Vol. I. No. 1. The Italian Pharmacological Society. Academic Press Inc. (London) Ltd., Berkeley Square House, London W1X 6 BA, 1969. 126 pp. 16.8 × 24 cm. Price 84/-, \$10.00 per 4 issues per annum.

Pharmacology for the Preoperative Visit. Vol. 6, No. 1. Edited by J. S. GRAVENSTEIN. Little, Brown and Company, 34 Beacon St., Boston, MA, 1969. xi + 396 pp. 15.5 × 23.5 cm. Price \$22.00/yr. subscription rate.

Precis de Microbiologie. Vol. I. By S. LAMIN and A. GERMAN. Masson & C^{ie}, Editeurs, 120, Boulevard Saint-Germain, Paris VI^e, France, 1969. viii + 669 pp. 16.5 × 21.5 cm. Price 75 fr.

The Psychopharmacology of the Normal Human. Edited by WAYNE O. EVANS and NATHAN S. KLINE. Charles C Thomas, 301-327 East Lawrence Ave., Springfield, IL 62703, 1969. xi + 252 pp. 15.6 × 23.3 cm. Price \$11.50.

Psychotropic Drug Response: Advances in Prediction. Edited by PHILIP R. A. MAY and J. R. WITTENBORN. Charles C Thomas, 301-327 East Lawrence Ave., Springfield, IL 62703, 1969. xii + 292 pp. 16 × 23.4 cm. Price \$12.75.

The Role of Learning in Psychotherapy. Edited by RUTH PORTER. Little, Brown and Company, 34 Beacon St., Boston, MA 02106, 1968. xii + 340 pp. 15.5 × 23.2 cm. Price \$12.00.

Steroid Reaction Mechanisms. By D. N. KIRK and M. P. HARTSHORN. American Elsevier Publishing Co., Inc., 52 Vanderbilt Ave., New York, NY 10017, 1968. xi + 476 pp. 14 × 22 cm. Price \$30.00.