

BOOK REVIEWS

CHROMATOGRAPHY. By Edgar Lederer and Michael Lederer. Second, revised and enlarged, edition. Pp. xx + 711 (including Index). Cleaver-Hume Press, Ltd., London, 1957. 72s.

This is the second edition of the most comprehensive book on the subject. The distinguished authors claim with unnecessary modesty that the unexpected success of the first edition and the ever-increasing development of chromatographic methods prompted them to prepare this second edition. It has been reported that this revision will be the last by these authors. Let us examine why this should be so. The book under review contains 700 pages, 139 figures, 175 tables and 3704 references, an enlargement of roughly 50, 55, 40 and 100 per cent respectively over the first edition, and this in the short space of four years. No significant reference can have escaped the painstaking eyes of the authors. Nor is this all; comprehensive indices of authors and subjects, an extremely detailed table of contents, with tables of retention values interspersed throughout the text, enable the reader quickly to find his way about the book. This expansion could not continue indefinitely without the work losing its character as a book devoted to a technique, and becoming a catalogue. The situation has been remedied by the establishment of a journal, limited to this subject, with one of the authors as senior editor.

What has the book for readers of this journal? Firstly, the techniques of chromatography have proved admirably suitable for the detection, isolation and determination of substances of biological (including pharmacological) importance, both in the animal and plant, *post* and *ante mortem*. Secondly, applications are more frequently appearing in the field of pharmaceutical analysis, and here might be mentioned the chapter headings: natural pigments, vitamins, hormones, antibiotics. Inorganic chromatography receives its due place in the book. A newer application—gas chromatography—is very briefly discussed in the text with a supplementary list of references. This application, the results of which have already received mention in the research pages of this journal, is likely to achieve an important place in pharmaceutical and pharmacological analysis. While not out of place, this introduction will not carry the investigator very far, and he will need to consult the specialised books which are beginning to appear.

Preceding the chapters on the individual chemical classes is a useful account of the general theoretical side including such topics as the modes of operation of chromatographic systems, a review of the different chromatographic porous media and descriptions of apparatus and procedure. While not exactly an introduction to the subject, this section is valuable in that it discusses those aspects from which many a practical chromatographer will derive enlightenment. The presentation is excellent and the price not excessive for such a useful compilation.

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TECHNIQUE OF ORGANIC CHEMISTRY, edited by A. Weissberger. Vol. X. *FUNDAMENTALS OF CHROMATOGRAPHY*, by H. G. Cassidy. xvii + 447 (including Indices). Interscience Publishers, London, 78s. New York, \$9.75.

This book is apparently addressed to those interested in the theory of chromatography. It is at present the only work which has any pretention to detailed discussion of the background of a subject which is usually studied for its practical applications. In the reviewer's opinion, this neglect of the theoretical background is much to be deplored and has tended to reduce books on the subject to recitals of recipes for dealing with specific groups of substances. While the study required to master the rather difficult mathematical descriptions of the chromatographic process, which have yet to achieve unanimity, may not repay the effort, an understanding of the principles involved will do much to improve the application. The background is certainly given in this book, mathematics and all. In fact, much introductory chemistry is present, relevant enough to the subject, but which might be assumed as knowledge appropriate to the level of education of the presumed reader. At the same time, the author gives instruction on technique, exemplified by such chapter headings as "on recognising and evaluating zones", "on choosing mobile and stationary phases" and "on using chromatography". The book is full of "know-how", including mention of many proprietary substances available in America and even a list of suppliers, with addresses, some in this country. The book retains many traces of the interest of the author in non-chromatographic adsorption, being a successor to an earlier volume which dealt with both adsorption and chromatography.

The wide coverage, well-indexed, ensures that the book contains much of value for the pharmacologist. There is not, however, very much of specific interest. The book is well produced in the usual manner of the series.

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