

BOOK REVIEWS

Proceedings of the Congress on Modern Analytical Chemistry in Industry, University of St. Andrews, June 24th to 28th, 1957. Published for the Society for Analytical Chemistry by W. Heffer & Sons Ltd., Cambridge, England, 244 pp., price 2 gns.

This Congress was divided into three sections:

I. Analysis in Modern Industry

II. The Application of Some Newer Analytical Techniques in Industry

III. Developments in Analysis for New Problems in Industry

containing altogether 23 papers. Few of these do not mention some application of chromatographic techniques to some special problem. Three of them deal more specifically with the applications of chromatography:

Recent Progress in Separating Substances of High Molecular Weight, by R. L. M. SYNGE, discusses chromatography, counter current distribution, electrophoresis, centrifugation and diffusion as well as ultrafiltration in the fractionation of polymers.

Analysis in Medical Research, by A. T. JAMES, presents several examples of the application of paper chromatography, column partition and gas liquid chromatography from the work of the author. Clinical chemists will be amazed to see that it is now possible to analyse the mixture of fatty acids from biological sources (e.g. rabbit sebum) with as little as one milligram of starting substance available.

The Application of Gas Chromatography in the Petroleum Industry, by A. I. M. KEULEMANS, discusses such problems as "Trouble shooting" during the start-up of a commercial plant and the use of continuous analysers for gas chromatography.

Each paper is followed by a discussion.

The reviewer is sorry to note that only a list of members, but no subject or author index had been prepared.

M. LEDERER (Arcueil)

Ion Exchangers in Organic and Biochemistry, edited by C. CALMON AND T. R. E. KRESSMAN. Interscience Publishers, Inc., New York and London, 1957, 761 pages, price \$ 15.00 or 120 s.

In the last decade it was publicly divulged that chemists on the wartime Manhattan Project had succeeded in solving an old problem—the rapid and clear-cut separation of rare earth elements. Their unprecedented success was accomplished by the use of synthetic ion exchange resins in combination with complexing agents. The repercussions of this event were felt immediately in biochemistry and resulted in several notable developments as exemplified by extraordinarily effective separations of amino acids, nucleic acids, carbohydrates, enzymes, viruses, and numerous other applications which have expanded the horizons of biochemistry.

Now a nearly 800 page book is devoted to the applications of ion exchange in biochemistry and medicine. An index of the amazing growth of the field is the fact that this book is more a survey than a detailed treatment.

The knowledgeable editors of this book have made an excellent choice of collaborators who, without exception, are among the most qualified people in the respective fields. The first 200 pages of the book consist of nine clearly written chapters on the principles of ion exchange and the techniques and apparatus. These chapters should prove especially valuable to the non-specialist who is interested in the latest views on the mechanism of action of ion exchangers, their preparation and properties, and many other aspects which help to explain the specific applications in the third section of the book.

The editors have not restricted the scope of the book to ion exchangers as such but have included chapters on the ion exchanging properties of tissues, cells, or bacteria, and the consequences of such properties to metabolism.

It has been said that this book was written by specialists for non-specialists. With this assessment the reviewer agrees. He would add though that the specialist will find it very useful and suggestive.

J. SCHUBERT (Argonne National Laboratory)