

BOOK REVIEWS

Papírová chromatografie (Paper chromatography), by I. M. HAIS AND K. MACEK, Editors, Nakladatelství Československé Akademie Věd, Prague, 1954, 720 pp. + viii, 3795 refs., 73 Tables, 243 Figs., price: cloth, 136 Kčs., board, 142 Kčs.

One of the founders of partition chromatography wrote: "The literature of the subject has already become so large that it can no longer be followed in detail" (A. J. P. MARTIN, *Brit. Med. Bull.*, 10 (1954) 161). The editors have sought to deal with this problem with the aid of those Czechoslovak scientists with experience in the application of paper chromatography and this has resulted in a carefully prepared book by 23 contributors. This book follows an earlier collection of articles on various aspects of chromatography by other workers which appeared in the form of a small book (*Chromatografie*, Prague, 1952).

Every aspect of paper chromatography is examined in detail from apparatus to elution, solvent and quantitative methods, from proteins and inorganic analysis to its part in the detection of radioactive materials. Paper electrophoresis, the history of chromatography, future prospects and theoretical aspects are dealt with concisely. The literature is fully covered up to the beginning of 1953; a less complete coverage exists for the remainder of 1953. In an effort to keep abreast of the literature during the setting up of the type, a number of the most recent references are given in full in the actual text.

The book will not only be of aid to advanced research workers in various fields, it will also assist research students and routine analysts. The book gives a clear exposition of the practical details (details of about 240 detection reagents, nearly 300 solvents, a dozen paper electrophoresis electrolytes and many helpful diagrams of apparatus) and a wealth of comment on the various methods derived from actual practical experience of the authors. Methods are not presented without a critical assessment (e.g. the section on proteins).

There are, however, a few major and minor defects such as the vague article by SLAVIK on clinical chemistry (p. 173), a tendency at times to become a recital of "the literature" more suitable for some "recent advances" and the incorrect position of sarcosine on the two-dimensional paper chromatographic amino acid map (p. 198). The article by PROCHÁZKA (p. 169) is, on the other hand, an interesting one on the past use and future possibilities in the application of paper chromatography to micro-organic synthesis.

Amino acids and other organic substances occupy a substantial portion of the book.

Naturally, the book does not stray far beyond the limits set by its title. It establishes a firm claim to translation that is in no way invalidated by the existence of other books which do not give such a detailed practical survey of paper chromatography.

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Isotopic Gas Analysis for Biochemists, R. F. GLASCOCK, Academic Press Inc., New York, 1954, V, 247 pp., 74 Figs., 8 Tables, price \$ 5.80.

Les isotopes et les radioéléments sont devenus un instrument de travail très utile, sinon indispensable aux biochimistes qui s'occupent de métabolisme. Les progrès de la chimie nucléaire ont mis à la disposition des chercheurs deux radioéléments particulièrement précieux, le ^{14}C et le Tritium. Ceux-ci présentent le grand avantage d'une durée de vie très longue mais aussi l'inconvénient d'une faible énergie de radiation et partant un mauvais rendement dans les mesures quand on opère sur les substances sèches.

La sensibilité et la précision peuvent être grandement améliorées en mesurant la radioactivité des gaz, obtenus par combustion, principalement par voie sèche, des combinaisons organiques isolées. Ceci nécessite un montage d'appareils assez compliqué, qui était jusqu'ici l'apanage des grands instituts, disposant de collaborateurs hautement spécialisés et techniciens d'élite. Mais les résultats étaient d'autant plus précis, la méthode une fois acquise. Le grand mérite de l'ouvrage de GLASCOCK est de fournir une description détaillée des techniques appropriées pour le montage des appareils nécessaires aux mesures en milieu gazeux et la manipulation des gaz en circuit fermé. L'auteur met à la disposition son expérience des mesures radiochimiques et n'épargne aucun détail descriptif pour assurer une bonne réussite des nouvelles techniques mises en oeuvre.