

BOOK REVIEWS

Die Papierelektrophorese. Methoden und Ergebnisse, by CH. WUNDERLY, 2nd Ed., Verlag H. R. Sauerländer & Co., Aarau and Frankfurt a.M., 1959, 202 pages, 72 figs., price Sw.Frs./DM 18.80.

The rapid expansion of paper electrophoresis, which has brought electrophoretic analysis within the reach of even small hospitals, was accelerated by the readiness of the founders and pioneers of moving boundary electrophoresis to accept the paper technique; they were fortunately free from prejudices against new methods, so often encountered in narrower minds. WUNDERLY, one of the co-authors of the classical manual *Die Bluteiweisskörper des Menschen*, belongs to these pioneers and he was able to incorporate the experience of many years already in the first edition of his *Papierelektrophorese*. The second edition (1959) covers a substantial part of the literature that has appeared since 1954; although it includes more than three times as many references (1665), the number of pages has only been doubled. The book has been entirely rewritten, but characteristic features of the first edition have been retained and in some cases emphasized; the book deals mainly with proteins, especially blood proteins (only 12 pages of the special part are devoted to non-protein substances), and it has been the aim of the author to give a maximum of information in a minimum of space (this is facilitated by a clear and distinct print and excellent paper); the sections on analytical techniques and reviews of biological applications are well balanced.

The second edition is introduced by a preface by P. KÖNIG*. Although the format and size as well as the numerous practical hints it contains correspond to a laboratory manual, the book also gives an authoritative report on recent progress. When seeking a reference, the reader is saved the trouble of turning over the pages by the system of numbered references on every page, which is extremely useful for a book of this type. Limitations imposed by the size of the book made it impossible for the author to cover the formidable amount of literature completely and to discuss all the results obtained by the authors quoted. For a more exhaustive treatment, the reader should consult a monograph such as *Electroforesis em papel* by RIBEIRO *et al.*

Among the points of technical interest it is worth noting that the book mentions the application on dry paper as the sole method even in the case of protein-containing samples. The suggestions on staining technique and on the use of polyethyleneimine

* We are informed in a footnote that this is one of the last documents written by Dr. PAULO KÖNIG, who died in São Paulo on November 8th, 1958. The reviewer would like to take this opportunity of commemorating this founder of paper electrophoresis of proteins, with whom he had occasion to exchange several letters. Although Dr. KÖNIG gave up this kind of work many years ago, his ideas of a chromatographic arrangement based on the molecular sieve effect showed acuteness of intellect similar to that which had manifested itself in the first communication on paper electrophoresis of proteins in 1937.

in sodium phenylmonosulfonate solution as a standard for protein staining and of a triglyceride mixture for lipoprotein staining are based on personal experience. An excellent discussion is devoted to a comparison of the proportions of blood proteins found by various methods and modifications. A frequently checked "own value" may be considered the most reliable reference standard for a given laboratory. The chapter on lipoproteins is not only twice as long as that in the first edition, but differs from it in the selection of valuable information it contains. The wide acceptance of paper electrophoresis for the study of serum proteins has established the merits of this method so firmly that more space is devoted to warnings against uncritical interpretation of electrophoretic data than to the enumeration of the advantages of the method. Experimental workers will appreciate the chapter devoted to animal serum proteins.

Misprints in authors' names do not occur very frequently. The subject and author indexes are satisfactory though far from complete. Both cover and typography are worth mentioning for their esthetic merits. The publisher and printer are to be congratulated for the short production time which has made it possible to account for all important papers up to 1958.

I. M. HAIS (Prague)

J. Chromatog., 5 (1961) 183-184

Quantitative Paper Chromatography of Steroids (Memoirs of the Society for Endocrinology, No. 8), edited by D. ABELSON AND R. V. BROOKS, Cambridge University Press, London, 1960, 103 pages, price 30 s.

The 100 or so pages of this publication deal with the proceedings of a symposium on the quantitative paper chromatography of steroids held in July 1958. Although the reader may well wonder why it should have taken two whole years for this book to appear, it nevertheless constitutes an up-to-date contribution on the subject, for the simple reason that today the problems involved have still not been solved. The $\pm 20\%$ degree of accuracy attained so far, on which even expensive equipment has failed to achieve any appreciable improvement, may be adequate for many biochemical purposes; moreover, where a high degree of specificity is required of a determination, the question of quantitative accuracy is generally of less importance. Considered in the absolute, however, a $\pm 20\%$ margin of error is too high. Try as one may to solve this problem, the factor paper = cellulose invariably plays a decisive and often critical role—so much so that for certain purposes the watchword "back to the column!" (e.g. celite) would appear justified. The various papers read at the symposium, and the contributions to the discussions, not only shed light on numerous aspects of this question but also deal with complete "quantitative" methods. Readers who have to tackle such problems will derive a great deal from this compilation, containing as it does a wealth of interesting details and personal experiences. The index at the back of this compendium adds further to its usefulness.

R. NEHER (Basel)

J. Chromatog., 5 (1961) 184