

Advances in Steroid Analysis, edited by S. Görög.

Proceedings of the Symposium on the Analysis of Steroids, Eger, Hungary: 20–22 May 1981. Elsevier, Amsterdam, 1982, pp. xi + 552, ISBN 963–05–3009–0.

This substantial volume contains, in some 550 pages, the papers given at the important meeting on steroid analysis held in Hungary in May 1981. There are 69 papers in all, about one-third of which originate in Hungary, and a further 15 from other Eastern European countries: almost all the remainder come from Western Europe, and just 2 from the United States. While this spread of authors may not be truly representative of world-wide research in this area, the range of topics covered is absolutely comprehensive — it is hard to think of a relevant analytical technique which is not discussed. The papers are sensibly arranged in groups according to technique, with an introductory section of six more general papers. Two contributions are outstanding here, the review by Adlercreutz, Fotsis and Heikkinen on the analysis of estrogens in biological fluids, and that by Görög on pharmaceutical steroids analysis. Succeeding sections deal with steroid–protein binding interactions (5 papers), immunoassays (19 papers), gas chromatography (6 papers), g.c./m.s. (4 papers), high-performance liquid chromatography (9 papers), thin-layer chromatography (13 papers, reflecting the great interest in this method in Eastern Europe), spectroscopy (5 papers) and polarography (2 papers). In such an enormous collection, it is inevitable that the quality of the articles will vary somewhat. In some cases the standard of English is indifferent, and there are one or two contributions of a rather routine nature. These limitations are insignificant compared with the large number of excellent contributions, and many analysts — not just those interested in steroid determinations — could dip into this book with profit. Amongst many examples, the papers on steroid immunoassays by Jeffcoate and Hubl, the exposition of derivative spectroscopy by Fell, and the paper on g.c./m.s. and complementary methods by Brooks and co-workers are outstanding.

The papers are reproduced from camera-ready copy and the quality of presentation is variable, though generally adequate. The publication delay is commendably short. The book is handsomely bound and, unusually for a volume of this type, has a reasonably good index. In summary, a book with a wealth of valuable information, stimulatingly presented, and very much to be recommended.

J. N. Miller

Reversed-phase High-performance Liquid Chromatography. Theory, Practice and Biomedical Applications, by A. M. Krstulović and P. R. Brown. John Wiley, New York,

1982, ISBN 0–471–05369–4.

The reversed-phase mode has become established as the most widely-used method in high-performance liquid chromatography, with more than 80% of HPLC separations over the past decade employing this technique. Many books on HPLC have appeared during this period but the present text is, the authors claim, the first comprehensive work to be devoted solely to reversed-phase systems. The early chapters cover the basic theory, the mechanisms of separation, column packing and column performance characteristics. Each topic is treated practically and also (where appropriate) on a theoretical basis with the relevant equations; symbols are fully defined in the text. The material is presented clearly and is well illustrated with line diagrams and graphs. The section on liquid chromatographic detectors is comprehensive and describes all the currently available LC-detector systems, including LC-mass spectrometry. In chapter 7 the authors discuss strategy in the development of RPLC methods, from sample clean-up and concentration to the selection of chromatographic conditions. Although some consideration is given to the optimization of the capacity factor (k'), there is no discussion of the powerful technique in which the k' values for each of several components, obtained by systematic variation in eluent composition, are used to select optimal conditions for the separation of a mixture.

Inevitably in a book of this size some aspects are covered only in outline. The chapters on chemical derivatization and ion-pair techniques give only a brief synopsis of these subjects. In view of the increasing use of ion-pair chromatography particularly, this is perhaps disappointing. However, most chapters have an extensive list of references and some also have a bibliography. In the last quarter of the book the authors present data from selected studies in the biochemical and biomedical field. These examples well illustrate the power of the method in the separation of various groups of endogenous compounds and of the major classes of drug substances. In some instances the merits of the reversed-phase LC method over established methods (TLC, GLC, adsorption chromatography) have been indicated.

One may disagree with the authors' prediction that "RPLC . . . holds great potential for routine therapeutic drug monitoring in the doctor's office . . .", but there is no doubt about the merits of the technique in the laboratory environment and this useful book will serve as an excellent introduction to the subject.

J. A. Clements