

Book Review

DEVELOPMENTS IN FOOD ANALYSIS TECHNIQUES—3. Edited by R. D. King. Elsevier Applied Science Publishers, London and New York, 1984. Price £37.00. 217 pp.

This book is the third in a series devoted to specialised areas of food analysis. The present volume deals with five such areas, all of which are of considerable current interest to the public analyst.

The first chapter, which takes up a third of the book deals with the analysis of dietary fibre. The authors, actively working in this field at the Food Research Institute, Norwich, deal with the origin of the diverse components of dietary fibre in terms of cell wall structure before reviewing the problems associated with the analysis of dietary fibre. The remainder of the chapter is mainly concerned with the different methods of isolation and analysis of milligram quantities of dietary fibre, including an account of a method developed by the authors, and concluding with some general recommendations for dietary fibre analysis.

With the second chapter of the book, devoted to trace element analysis, we are on more familiar ground, perhaps some might say, too familiar. However, the authors, both of the United States Department of Agriculture, not only give a useful short review of atomic absorption and emission techniques, but deal also with quality assurance for trace analysis, and with the handling and evaluation of the resultant data. The treatment, though brief, does indicate some of the problems and pit-falls in this area.

Chapter three, by a Dutch author, gives a quite detailed review of the present position with regard to mycotoxins analysis. An interesting discussion of the problem of sampling and sample preparation leads on to a consideration of analytical techniques. Bio-assays are briefly considered, but the bulk of the chapter is concerned with chemical analysis, from extraction and clean-up to the various methods of detection and determination. Most of the methods are chromatographic, but several pages are devoted to immunochemical procedures, in particular, radio-immunoassay and enzyme-linked immunosorbent assay (ELISA).

The next topic is entitled "Food and its Pesticides", again of United States origin. The chapter is an outline of pesticide residue analysis, concentrating on multi-residue procedures for vegetable products, meat and fish products and water samples. The reference list for this chapter is the shortest in the book, and, all the references are American, only two being later than 1971, these being to official manuals. In a "Development" series one would expect an account of more recent work.

The final chapter takes us into an area which was touched upon in chapter

three, that of immunochemical methods in food analysis. The French authors provide useful background explanation of basic principles, and deal with the different methods available. Tables are included which list applications in such subject areas as toxins, hormones, meat origin, and foreign proteins in meat products. This chapter constitutes a timely review of techniques which are likely to become increasingly useful.

The chapters are, with the one exception, extensively referenced, generally through to 1982, with some for 1983 and at least one for 1984.

The book is well produced and, considering these inflationary times, not exorbitantly priced. A useful index is included.

In the reviewer's opinion, it would be a worthwhile acquisition for the public analyst's library.

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