

Book Reviews

Instrumental Analysis in the Biological Sciences. By M. H. Gordon and R. Macrae. Blackie, Glasgow and London, 1987. xii + 243 pp., illus. £17.95. ISBN 0-216-92010-8.

Chemical analysis is rapidly becoming the major method of observation used by biologists to systematize their science. The ordinary day-to-day activity of all biologists, from those who study the social behavior of animals controlled by pheromones to those who study the evolution of the genetic code, has become the detection, identification and quantification of chemicals. Furthermore, the analysis of chemicals in natural systems has become easier and more accessible because of automated instruments. These instruments have expanded our ability to 'see' into the chemical nature of biological systems to the point that more and more biology can be explained as a set of chemical reactions.

The change from microscope to mass spectrometer has occurred within a fraction of the working career of most biologists. Thus, it is essential that information about the continuously evolving techniques of instrumental analysis be organized for this remedial education. This is not only true for biologists but chemists as well. Indeed, the objective of the authors of *Instrumental Analysis in the Biological Sciences* is to do just that and to some degree they have prepared a concise description of the more common methods of chemical characterization.

The book has three chapters on chromatography, eight chapters on spectrometry, and one somewhat unrelated chapter on electrochemistry, containing a brief summary of the history of each technique, its theoretical

basis, and some details of their implementation. A more informative title would have been 'A Concise Description of Chromatography and Spectroscopy.' However, book titles are not usually intended to describe contents but to attract readers instead. In this case the target is biologists.

The book is too brief for use as a laboratory guide, but it does function well as a quick introduction to instrumental techniques. Each chapter ends with a list of citations that present the subjects in greater detail. My only disappointment is that the authors do not provide examples of how the techniques they introduce answer questions in biology, and why their future use will be an ordinary activity of biologists.

With this book the authors have prepared a map to some of the new tools of biology. It introduces each technique clearly and shows the way to more detailed information. Biologists will need more efforts like this if they are to keep up with the ever changing tool box of science.

Terry E. Acree

Cereals in a European Context (First European Conference on Food Science and Technology). Edited by I. D. Morton. VCH, Ellis Horwood, 1987. 523 pp. DM230.00. ISBN 0-895-73523-7 (New York) ISBN 3-527-26412-4 (VCH, Weinheim).

This is a valuable collection of 37 research papers and 32 posters that were presented at the first European Congress of Food Science and Technology.

In over 500 pages, experts from ten European countries have focused their attention on cereals under the following headings:

- Cereal Genetics/Plant Breeding
- Fermentation/Biotechnology
- Cereals and Nutrition
- Primary Cereal Processing including Milling
- Secondary Cereal Processing including Baking and Cereal Chemistry

Cereals are undoubtedly very important in Europe and this book gives the reader an up to date picture of current research as well as an insight into the economic and social forces shaping the demand for cereal products.

The presentation is excellent. All the figures, black and white photographs and tables are clear and there is a comprehensive index. Food scientists and technologists who are currently researching into the various aspects of cereals will find this book very useful.

B. E. Brockway