

coverage and specific topics. It gives an excellent overview of the subject. The authors skillfully pick out the important practical applications, but never seem to overstate the commercial implications. In this sense they seem to have their feet on the ground. I did notice that Chapter 10 had ten co-authors and I was intrigued to know what were their individual contributions. One indicator of the value of the book was my difficulty in recovering it from colleagues who were constantly making use of it.

The presentation is good and the book has been well edited. It is more coherent than many symposium proceedings and should be consulted by Biotechnology and Food Technology students.

Mike Lewis

Food Microbiology. Volume I: Concepts in Physiology and Metabolism; Volume II: New and Emerging Technologies. Edited by T. J. Montville. CRC Press, Boca Raton, Florida, 1987. Vol. I: ISBN 0-8493-6478-7, 161 pp. Vol. II: ISBN 0-8493-6479-5, 195 pp.

Although these two volumes are entitled 'Food Microbiology' seven out of the ten chapters deal with aspects of the general physiology and genetics of microorganisms with no particular emphasis on microbes important in foods. While microbial physiology and genetics are, of course, highly relevant to food microbiologists they are generally well covered in textbooks and review journals.

General microbiological topics covered include: Osmoregulation by microorganisms at reduced water activity, Pumps and carriers: nutrient transport in bacteria, Electron transport in anaerobes, Bacterial sporulation and germination, Basic immunology, Microbial genetics and recombinant DNA and Continuous culture: theory and applications. Some of these are comprehensive and lucid expositions suitable for the general reader but others require considerable previous knowledge for their appreciation.

The three particularly food-orientated chapters are on Genetic regulation of toxin production by foodborne microbes, Potentials and impediments in automated food microbiology, and Rapid automated methods. The first of these is rather diffuse because, in most cases, the genetics of toxin production are not well understood. The second is a thoughtful essay on the strategies and possibilities for rapid methods while the last is an excellent survey of currently available methods of speeding up and automating the assessment of the microbiological qualities of foods, together with a consideration of the advantages and disadvantages of each method. Techniques covered include

dip slides, the spiral plater, hydrophobic grids, impedance, radiometry, microcalorimetry, direct microscopy, limulus lysate, and ATP.

David Owens

Frying of Food. Edited by G. Varela, A. E. Bender & I. D. Morton, VCH Publishers, Weinheim, FRG, and Ellis Horwood, Chichester, UK, 1988. ISBN 0-89573-648-9. 202 pp. Price: DM 178·00.

This book was compiled from contributions to the First International Symposium on the 'Frying of Food' held in Madrid in May 1986. The book is wide-ranging, covering chemical, technological and nutritional aspects relevant to frying food in oil. The introductory chapters attempt to place frying in context and describe the role of fat in human nutrition. The frying process is then discussed in Part I which covers methods and equipment, the behaviour of olive oil and fat penetration into food during frying, while Part III describes chemical changes in frying oils and analytical procedures for the evaluation of used frying oils. Part IV covers recent trends in frying, including snacks, fast foods and large-scale catering.

The collection of papers covering such diverse areas relevant to frying is very welcome, since the topics covered are widely scattered through the literature. Some of the chapters concentrate on reviewing the literature but others present new experimental results. Although the coverage lacks depth in places, food technologists interested in frying will find this a useful overview of the complexities of frying. Most chapters are well referenced, but the references have been omitted from Chapters 4 and 5 by Fedeli and Guillaumin, respectively. I can nevertheless recommend this as a valuable text for scientists interested in the frying of food.

M. H. Gordon