

Book Reviews

Food Microbiology. M. R. Adams and M. O. Moss. RSC, 1995. ISBN 0 85404 509 0. 380 pp. £22.50.

Selecting the material for a basic text book on food microbiology must be something of a nightmare, because many of the topics will have a literature running to thousands of references, as well as being the subjects for entire books. In addition, the competition is well established, and some texts like *Modern Food Microbiology* by Jay have remained inexpensive even in hard-back editions. So the question for any lecturer advising a student becomes, in essence, what advantages does this new book from the Royal Society of Chemistry have to offer?

Certainly, it targets its intended readership very precisely and, after the introductory chapters, there are two excellent sections on the factors that affect the growth and survival of micro-organisms in foods, and then how this knowledge is applied to the preservation of food. Much of the information is fairly standard, but it was fascinating to learn that, in Greenland, there is a fermented shark product with a pH of around 11. The natural questions as to why any self-respecting shark would wish to travel that far North to be caught, or indeed why the Greenlanders would bother to ferment it anyway, are sadly left unanswered.

A further chapter is devoted to the microbiology of the major food commodities, while over 100 pages are set aside for coverage of bacterial and non-bacterial agents of food-borne illness. All the major causes of disease are mentioned, including pathogenic bacteria, viruses, toxigenic algae and fungi and even protozoa and helminths and, in every case, the detail is sufficient to give the reader a sensible understanding of the organism and its activities. An introduction to fermented foods follows, and the coverage is completed with chapters on more practical issues, one dealing with methods of microbiological examination and one with controlling quality. Given the range of methods and media now available to examine foods, the value of including a short 'review' chapter on the subject is, perhaps, debatable. Obviously a section on 'methods' does 'complete the picture', but it might have been more helpful to a student if the space had been allocated to the control section. For example, only around one page is devoted to the identification of Critical Control Points, and even the example of HACCP in action taken from the USDA recommendations for raw beef, does not make for easy understanding by any newcomer to food microbiology. Whether or not teachers

or students will opt for this text ahead of 'the competition' remains to be seen but, at £22.50 for around 380 pp. of scientifically accurate and informative text, the book represents extremely good value for money. However, the decision to exclude references from the text is a little disappointing, particularly as the book is intended for both undergraduate and post-graduate classes. Nevertheless, this book should prove to be a most welcome addition to the literature, and both the authors and the Royal Society of Chemistry deserve full credit for their achievement.

Richard K. Robinson

Ullmann's Encyclopedia of Industrial Chemistry, Vol. A35: Starch to Surfactants. VCH, Weinheim, 1994. xv + 817 pp. 600 DM.

With such weighty subjects as starch, steel, steroids, sugar, sulphur, superconductors and surfactants, this volume contains something for everyone. The chapter on starch provides a good example of the overall scope of these volumes with its mix of production methods, properties, and chemical structure, but contains in addition a fascinating account of alginates and the various industrially important gums. Not surprisingly the chapter on steel is the longest (246 pp) and contains a full description of all of the manufacturing processes with full production data. The physical and mechanical properties are also discussed in detail. I was disappointed with the chapter on steroids which was extremely brief and only covered the bare essentials. Strontium also receives minimal coverage, but sugar production receives more lavish attention and there is a timely account of the importance of the various sugar alcohols—xylitol, sorbitol, mannitol, etc. There are especially extensive chapters on sulphur, sulphur dioxide, sulphur trioxide and sulphuric acid; and lesser accounts of other sulphur compounds. I had hoped to see a brief account on the sulphonamides but perhaps this occurs under 'antibiotics' (though there was no cross-reference). The physics and practical utility of superconductors is highlighted, though there is little chemistry in the chapter; but the final chapter on surfactants redresses the balance with an excellent account of their chemistry and properties. As usual this volume is an essential purchase for university libraries and industry.

John Mann