chapter, gives a good coverage to packaging technology that is often poorly covered in general texts. Chapter 6 reviews batch and continuous butter manufacture, touching on mixed fat and reduced fat spreads plus the production of anhydrous milk fats. In the case of milk fat fractionation, the more widely used dry fractionation process would have been more appropriate than the centrifugation route described.

The following chapter on cheese concentrates on a 'continental' rather than UK approach to cheese making and as such will be of particular interest to those interested in widening their repertoire of cheese-making processes. In the first section the fat content is omitted from the table of nutrients and in many places the term "fungus" has been used instead of "mould". The summary table 7./16 has part of the third column displaced by two lines.

Chapter 8 covers the technology for the manufacture and packaging of acidified products including, yoghurt, kefir, acidophilus and soured milks. Chapter 9 covers long-life concentrated milks, bringing in evaporation, drying and retorting technologies. The sections on drying cover the full range from roller drying to multi-stage spray dryers. The commodity-related chapters are concluded by a review of whey processing.

Short chapters covering generic areas in dairy technology, the critical area of cleaning and disinfection, water supply and wastewater treatment, refrigeration, energy supply, electricity and finally hygiene and occupational safety form a third section. However, the latter chapters were unfortunately too brief to be really useful.

Overall, the book has left mixed feelings. There were some very good sections and the approach complements that of others in this field. The general standard of presentation, including the wide use of diagrams, was good. However there are very few references to sources of either original or further information to guide the reader. Furthermore, there are a large number of typographical errors that have crept in and escaped the proof reading; some are minor but others could mislead the unwary. These criticisms apart, this book will find a useful place in a dairy library.

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PII: S0308-9146(98)00187-3

***Analytical Methods of Food Authentication*., Ed. by P.R. Ashurst and M.J. Dennis. 1998. London: Blackie Academic and Professional. xiii + 350 pp. ISBN 07514 04268. £79.00.**

This book is the successor to the earlier volume 'Food Authentication' by the same editors. It surveys the analytical methods currently used to investigate authenticity or adulteration of food and it comprises 12 chapters, each contributed by eminent scientists. The first chapter is introductory and discusses the aims of food authentication, sampling, interpreting databases, data evaluation, new technology, and methods of analysis. Each of the next ten chapters discusses the application of a particular technique, or analysis of a type of component, to food authentication. The format is not entirely uniform but each chapter gives the principles, practical considerations and many examples of application. In most cases, limitations and the future of the technique are also considered. These ten chapters are entitled: Stable isotope analysis by mass spectrometry, Nuclear magnetic resonance spectroscopy, Infrared spectroscopy, Oligosaccharide analysis, Enzymic methods of food analysis, DNA/PCR techniques, Electrophoretic methods, Antibody techniques, Trace element analysis for food authenticity studies, Pyrolysis mass spectrometry in food analysis and related fields: principles and application. The final chapter deals with the principles and application of multivariate data analysis to food authentication. It is inevitable that there will be some overlap between chapters in a book of this type, but this has been kept to a minimum by the editors while each chapter is selfcontained. Each chapter ends with a reference section which, in most cases, is extensive. The index is good and runs to 14 pages. On the whole, the book is very well produced, although a few diagrams are rather faint. Overall, this is an excellent book which will be of great value to food analysts and other professionals concerned with food authenticity.

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