

Exactly why the overall impact of the book is so disappointing is difficult to define, but somehow the content does not live up to the high expectations generated by the title. Perhaps operatives in the food industry will find the text helpful as an initial guide to preservative action, and certainly the coverage of less widely known compounds could prove useful. However, I suspect that any potential readers involved with, for example, product development will need a great deal more information than this text can provide.

**Richard K. Robinson**

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**Detection Methods for Irradiated Foods: Current Status.** Edited by Cecil H. McMurray, Eileen M. Stewart, Richard Gray and Jack Pearce. The Royal Society of Chemistry. ISBN: 0 85404 770 0. XII + 432 pp. Price: £79.50.

Public awareness on matters of food safety has reached an all-time high following a number of high profile incidents over the past few years. Food irradiation is a technique that, in principle, can be used to improve the safety of foods; however, the consumer, quite correctly, demands the right to know the processing history of any food he or she might purchase. It is thus gratifying to see collected in one volume, detailed descriptions of the major techniques available to distinguish between irradiated and non-irradiated foodstuffs. This book is, in essence, the scientific record of an international meeting on analytical detection methods for irradiation of foods held at the Queens University of Belfast in June 1994; as such it consists of articles (often quite detailed) on a variety of topics by a range of authors. In my opinion, this book is most likely to appeal to analytical scientists, particularly those involved in the analysis of foodstuffs.

The book is divided into several sections, each devoted to a particular analytical technique (or group of techniques); of particular note are substantial sections on electron spin resonance, thermoluminescence, the use of lipids and DNA methods, together with other chemical, physical and biological techniques. The text describes the use, and adaptation of these techniques to a range of different types of foodstuffs, presenting a range of problems for the analyst. For example e.s.r measurements are not confined to relatively 'dry' foods, where radicals produced on irradiation are prevented from decaying by virtue of the rigid matrix provided by the food material, but soft fruits and meats are also analysed, utilising seed and bone components, respectively.

While the tone is generally positive, clearly considerable effort has gone into testing both the validity and the limitations of the particular methodologies

described. On the negative side, I felt that the chapters in the last section of the book, describing the poster contributions were rather too short to be of great use. This minor point aside, this text will be a useful addition to the library of the food analyst. Although this is, in essence, a book for the specialist, all consumers of food will be interested in the broader message that comes from this volume, namely, that the methodology exists to police the correct labelling of irradiated foodstuffs.

**F. J. Davis**

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**Fats and Oils.** Clyde E. Stauffer. Egan Press, St. Paul, 1996. ISBN 0 913250 90 2. 149 pp. US \$66.

This text is part of the Egan Press Handbook Series aimed at providing practical guides for the Food Industry. A wide range of topics relating to fats and oils is covered in 10 chapters. The chapters cover functional properties, analytical tests, properties of emulsifiers, refining and production, bakery products, frying fats, chocolate and confectionery coatings, salad dressings, nutritional topics, and fat and calorie reduction. Useful information is also given in appendices, which describe the nomenclature and sources of fatty acids, the fatty acid composition and iodine value of fats and oils, specifications for shortenings and margarines, and glossary of terms relevant to the fats and oils industry.

The topics are described at an introductory level this is useful for students or food technologists lacking a background in the science and technology of fats and oils. The information is generally accurate and described in a clear and precise manner. However, the definition of free radical is odd and chylomicra is included in the glossary instead of chylomicron. Physical refining is omitted from the book.

The European reader may be put off by some of the American conventions used by the author, e.g. weights in lb, prices in \$, and a list of antioxidants approved by the FDA. At least temperatures are given in °C (or sometimes in both °C and °F). Chemical structures are given for a range of lipids, surfactants and metabolites, but references are only provided in the chapters concerned with fat and calorie reduction and analytical tests.

Despite these reservations, the author has achieved his aim of providing a guide to scientific and technical aspects relevant to technologists using edible fats and oils, and this book is recommended for purchase as an introductory text with much useful information.

**M. H. Gordon**