

subsequent extensive studies with humans and primates and conclude that these lesions have not been found even when there is a high dietary intake of these acids. The chapter by G. R. Thompson on the rôle of lipoproteins in transporting fat unfortunately overlaps that by Brindley, but also deals with the somewhat rare genetic defects which lead to pathological increases in these lipoproteins.

In case the reader at this stage starts taking massive daily doses of polyunsaturated fatty acids, A. S. Smith provides a warning of the possible harmful effects this might have in view of their potential cocarcinogenic and immunosuppressive effects. An isolated chapter by G. Billek on the formation of 'polar material' in heated fats and oils appears at this point, followed by a thought-provoking paper by M. J. Gibney on the rôle of food and nutritional scientists in the formulation (or non-formulation!) of dietary guidelines to reduce coronary heart disease. This could be linked with the excellent summary by R. V. Crawford of patterns of consumption and production world-wide of refined fats and his plea to understand the constraints placed on food manufacturers in an extremely competitive situation. The final chapter, by J. W. Marr, takes yet another look at the basis for recommendations for dietary change and the practical problems of convincing the public that scientists have got it right this time.

This is an important book which contains a great deal of valuable information on a topic which is of major importance to readers of *Food Chemistry*. It would have benefited enormously by strict editorial control in reassembling conference material into a coherent book.

R. R. Dils

**Sensory Evaluation of Food, Theory and Practice.** By Gisela Jellinek. Ellis Horwood, Chichester, 1985. 429 pp. Price: Hardcover, US\$41.50.

This book is one of the Ellis Horwood Series in Food Science and Technology and is an English version of the original German book. The quality of translation is very good, ensuring minimal loss of meaning and accuracy. However, a major disadvantage is that the suggested suppliers of materials are in Germany.

I found the title misleading as the term 'sensory evaluation' does not appear in the text, and the major emphasis is on 'practice' not 'theory'. A

more appropriate title might be 'Practical Applications of Sensory Analysis'.

There are fifteen chapters of varying lengths. In the Introduction, Professor Tilgner discusses the differences between organoleptic and sensory testing and outlines Dr Jellinek's interesting career. The chapters cover a general introduction, general testing conditions, programme of a course, taste, odour, aroma, other senses, definition of texture and flavour, threshold, difference and ranking tests, basis of the flavour profile and dilution flavour profile, special explanations and testing conditions, organisation of a complete training course, and individual steps in selection of test subjects.

Most chapters are full of extremely detailed instructions on how to plan and conduct sensory tests and analyse the data. However, not all areas of sensory analysis are covered in the same detail and depth. There is a bias towards the sense of smell with separate chapters on odour and aroma, yet a number of the remaining senses are all together in one chapter.

At the end of each chapter is a summary, plus a list of relevant references. Chapter 13 contains a very extensive list of additional references which are subdivided into selected topic areas. These include review articles and symposia proceedings. Comprehensive author and subject indices are provided at the back of the book.

The importance of statistical analysis of results is stressed, but only basic methods are included. However, for the vast majority of routine sensory tests performed in industry, these are often adequate. The relevant significance Tables for various tests are given. In fact, 16 pages are devoted to the rank totals required for different levels of significance.

Most of the Tables in the book are excellent; for example, those on test solutions for the four basic tastes, chemicals for odour recognition tests and random digits suitable for sample codes. The specimen test sheets are very useful as examples but, on many occasions, sheets must be specially designed for each test.

Other useful items worthy of special mention are extensive lists of suggestions for further exercises, details and check lists for conducting sensory courses, plus the formula and preparation instructions for plastic cones which possess different degrees of hardness.

Points of concern include a number of general statements which could give the impression that sensory analysis does not have any controversial areas. Very clear-cut distinctions are made between organoleptic testing and sensory analysis, which conflict with the British Standards Institution

definitions (BS 5098: 1975). The attention to detail verges on the extreme and I feel it should be stressed that the materials and equipment listed are suggestions. Some are not essential and, for those that are, alternatives are usually available.

The quality of print, Tables, diagrams and illustrations is good, making it easy to read, understand and remember details. At approximately £30, I think the price is reasonable.

Dr Jellinek has revealed some of her extensive knowledge, which was acquired over years of experience in the field. She is clearly very enthusiastic and dedicated and has a systematic, thorough and practical approach to all topics. Many of the questions which people ask about the practical aspects of planning and conducting sensory panels are answered. A number of misnomers are highlighted and corrected. Some may think that, by following the intricate details provided in the book, anyone can be successful in this field. However, as Dr Jellinek points out, the sensory analyst must possess certain qualities, such as a sense of humour, tact and the ability to inspire motivation and enthusiasm. None of these is acquired simply by reading books.

There are not many books on sensory analysis. This one provides details on the practical applications of this very complex and important area. Unfortunately, readers will have to look elsewhere for the essential theoretical principles on which the practical applications must be based.

A. Tunaley