

### Book reviews

***Flavourings*, E. Ziegler, H. Ziegler (Eds.). Wiley, 1998, XVI + 710 pp. ISBN 3-527-29786-3, £130.**

Originally published as “Die natürlichen und künstlichen Aromen” in 1982, *Flavourings* is a collaboration by 37 authors, covering all aspects of food flavourings, from composition and preparation to analysis and legislation. Knowing this, the reader might surmise that the book could be overlong, lack continuity and there may be some problems with the translation from German into English. In fact, all of these problems exist, plus a few more, in this 700-page marathon.

The arrangement of the book surprises me. I would expect such a book to begin with definitions, go on to raw materials and their chemistry, followed by extraction techniques, applications, analysis, then legal aspects. In fact, immediately after a small introduction, extraction techniques are covered in detail, including pages of physics, mathematics and specifications. The definitions of flavour and flavouring do not appear until page 126.

There are only seven chapters and the best of these, unsurprisingly, are the ones with only one or two authors. Most of the chapters are collections of essays and little attempt is made to disguise this fact. As well as an introductory chapter, there are 20 chapter parts labelled “Introduction”. On top of this, there are two chapter parts labelled “Conclusion” and one called “Final Remarks”, none of which occur at the end of a chapter!

The Quality Control chapter exemplifies the problem with the book. Extraction of the volatile components of the flavouring, followed by gas chromatography/mass spectrometry, must surely be the most common instrumental method of flavour/flavouring analysis, yet only merits four pages, as part of a section on general methods. There are no mentions of headspace extraction, either static or dynamic, or the increasingly popular solid phase micro-extraction. Gas chromatography/FTIR spectrometry, a rarely used technique, described

as relatively new, although at least 15 years old, is afforded a similar number of pages in the section. The author of this section was in restrained mood, whereas the author of the same section on stable isotope ratio measurement, an esoteric technique, used to determine whether a flavour compound is derived from natural or fossil sources, wrote an unfettered 56 pages! At least this article appeared to have been recently written. Scanning the reference lists accompanying each section reveals that many of the sections were written 5 years ago, accounting for the lack of information on flavour extraction, as well as the absence of the large amount of recent work on flavour binding and release. The sections on biotechnological production of flavour must also be similarly dated. A purchaser of this book with an interest in any of these fields would surely feel let down when he realised that their coverage was out of date.

There are a multitude of typographical errors and the mangled English in the chapter “Manufacturing Processes” means that the reader has to concentrate fully in order to understand what the authors are trying to say. Other problems exist with regard to incorrect chemical nomenclature, lack of relevance of some of the sections to flavouring and repetition of information.

So many flaws in such an expensive book mean that I cannot recommend it. A future edition ought to be divided into two, with processing, applications and legislation in one book and composition and analysis in the other. One or two authors per chapter and an English editor are necessary. Furthermore, it may seem obvious, but nobody is going to buy such an expensive book if it is 5 years out of date.

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