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Book review

Advanced Dairy Chemistry Volume 2: Lipids, 3rd ed., P.F. Fox, P.L.H. McSweeney (Eds.), Springer, 2006, 801 + xxv pages, Cost £199.

This is the second volume of the third edition of this series on advanced topics in dairy chemistry, which has been running for over 20 years. The third volume represents a major expansion and updating of the second edition which was published in 1992. The number of chapters has been increased from 10 to 22 with 37 contributing authors from many countries.

The first four chapters describe the composition of milk fat, the influence of nutrition and the development and secretion of milk fat globules. Chapter 3 is devoted entirely to the topical subject of conjugated linoleic acid.

Chapters 5–8 describe the physico-chemical properties of milk fat, including information on fractionation and enzymic modification.

Chapters 9–14 provide detailed information of the significance and role of milk fat in dairy products: butter and spreads; cream; cheese; ice cream; milk powder; infant formulae.

There are two chapters on enzymes, rancidity and oxidation, a chapter on the nutritional significance of milk fat and a chapter specifically on oxysterols.

The final four chapters concentrate on the application of analytical techniques to milk fat including High Performance Liquid Chromatography, Gas Chromatography, Spectroscopic Techniques (NMR, IR and Fluorescence), ultrasound analysis and a range of physical characterisation techniques.

The authors are all leading experts in their field and the detail and quality are generally excellent throughout. This third edition represents a real advance on previous editions with real increases in both breadth and depth, with a fair degree of novelty and topicality. It must be the most comprehensive work available on milk lipids. I would thoroughly recommend the book for academics, advanced students working in the field of dairy science and technology, and researchers working in dairy companies or other institutions. However, at £199 it is beyond the means of undergraduate students.

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