

Book reviews

Introduction to Microscale High-performance Liquid Chromatography, edited by Daido Ishii (VCH Publishers Inc., Suite 909, 220 East 23rd St., New York, NY 10160-0425, 1988, 208 pp., \$59.95).

As the title indicates, this is a review of the current state of microscale HPLC. It is divided into several chapters: instrumental requirements in microscale HPLC, microscale columns, detection systems, hyphenated systems that employ microscale columns, post-column derivatization in microscale HPLC, applications of microscale HPLC, and nine appendices which list available packing materials for column preparation.

Although microscale HPLC offers many advantages over conventional HPLC—shorter separation times at high resolution, great savings of mobile phases, reduced problems with solvent disposal—the field has not developed to the extent of routine packed column HPLC in this country. There is a lack of commercially available columns and suitable equipment, since specially designed detectors and pumping systems must be employed.

Perhaps we are at a stage comparable to the time when capillary gas chromatography was beginning to be widely adopted in laboratories. Regardless, the area of microscale HPLC generally has been neglected, except for the very few commercially available systems and those systems, components and columns reported in the literature.

This is an interesting and timely book because it is completely devoted to this area. It should be read by those contemplating a microscale HPLC-system purchase as it could avoid costly errors. Furthermore, it should be read by those working in this area because the many separations and techniques shown will be of assistance in the development of microscale separation.

E.G. Perkins

Capillary Gas Chromatography in Essential Oil Analysis, edited by P. Sandra and C. Bicchi (Huethig Publishing Ltd., 212 N. Barry Ave., Mamaroneck, NY 10543, 1987, 435 pp., \$58).

This book begins with an introduction of essential oil analysis and is followed by a short chapter on aspects of essential oil preparation. Other chapters include consideration on the selection of capillary columns for essential oil analysis, microtechniques in essential oil analysis, headspace versus classical analysis, fingerprints in essential oil analysis, industrial quality control of essential oils by capillary GC, retention indices in essential oil analysis, dual-channel analysis of essential oils with fused-silica capillary columns and GC-MS of essential oils-computer matching techniques.

Part 2 covers positive ion and negative ion chemical ionization techniques, artifact formation by chromatographic techniques, FT-IR analysis in essential oils and multidimensional analysis in essential oil analysis.

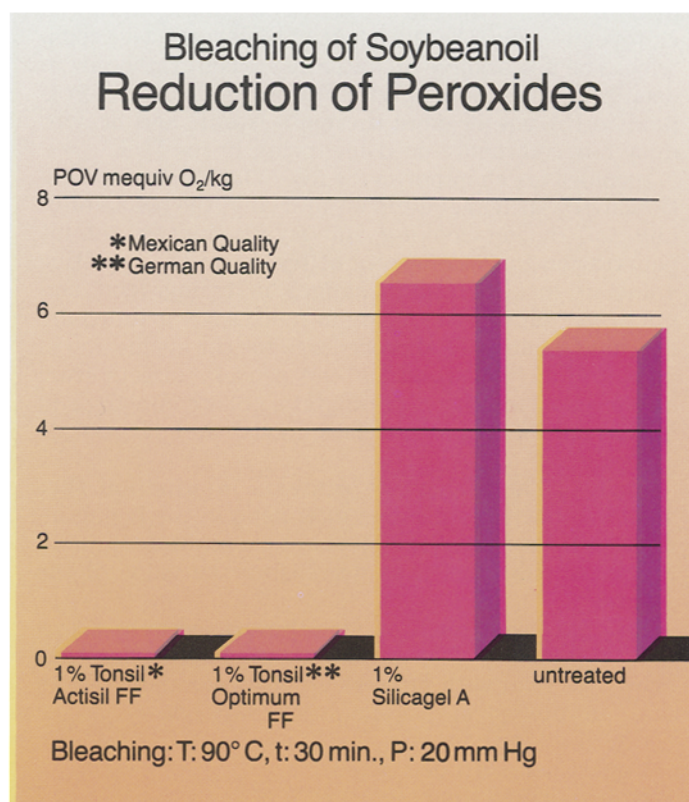
Individual chapters are loaded with illustrations of separations—a chromatographer's delight! They are clear and well done. The index appears adequate but

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Publications

lacks depth, considering the coverage of material in the chapters.

It is difficult to produce a comprehensive book such as this one; the editors are to be congratulated for their efforts. The book is a pleasure to read, and the wealth of material available will save many hours in the library and lab. Although intended for audiences with a major interest in essential oils, this book is highly recommended to those in the lipid field who are interested in odor flavors derived from lipids. It contains much material that will be directly usable.

E.G. Perkins

Frying of Food: Principles, Changes, New Approaches, edited by G. Varela, A.E. Bender and I.D. Morton (VCH Publishers, Suite 909, 220 East 23rd St., New York, NY 10160-0425, 1988, 202 pp., \$125).

This book is the compilation of papers presented at the First International Symposium on the Frying of Food, held in Madrid in May 1986. The contributors—all European—reflect the oil usage in their respective countries. The use of olive oil and other unsaturated oils in deep frying is emphasized; however, little attention is paid to the use of more thermally stable and heavier duty oils commonly used for frying in the U.S.

Included are chapters on the role of fat in human nutrition, methods and equipment in frying, the behavior of olive oil during cooking and frying, kinetics of fat penetration in food, effects of frying on the nutritive value of food, vitamin changes in frying food and nutritive value of the frying of food. Also included are chapters on analytical procedures for the evaluation of used frying fats, volatiles and sensory effects from heated oils, stability of frying fats, polar compounds in heated oils, snacks and fast foods, and large-scale catering.

Each of these chapters contains information that would be useful to persons interested in the frying industry. However, of the 15 chapters, eight contain no literature citations, thus decreasing the value of the volume.

Because this is the first book that has addressed this area, it is nonetheless an important contribution that should be read with interest by processors and others with an interest in deep-fat frying of foods.

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New books

Palm Oil, edited by F.D. Gunstone, (Critical Reports on Applied Chemistry), John Wiley & Sons Ltd., Baf-

ins Lane, Chichester, W. Sussex PO19 1UD, England, 1987, \$67.50.

Advances in Standards and Methodology in Spectrophotometry (Analytical Spectroscopy Library, 2), edited by C. Burgess and K.D. Mielenz, Elsevier Science Publishing Co. Inc., PO Box 1663, Grand Central Station, New York, NY 10163, 1988, 404 pp., \$102.75.

National Cottonseed Products Association's 1988-89 Trading Rules, National Cottonseed Products Association (NCPA), 2400 Poplar Ave., Memphis, TN 38112, \$10 per copy for non-NCPA members, \$5 per copy for NCPA members.

The following books are available from Marcel Dekker Inc., 270 Madison Ave., New York, NY 10016.

Countercurrent Chromatography: Theory and Practice (Chromatographic Science Series/44), edited by N. Bhushan Mandava and Yoichiro Ito, 1988, 752 pp., \$115 US and Canada, \$138 elsewhere.

Pharmaceutical Dosage Forms: Disperse Systems, Vol. 1, edited by Herbert A. Lieberman, Martin M. Rieger and Gilbert S. Banker, 1988, 472 pp., \$89.50 US and Canada, \$107.25 elsewhere.

Crystallization and Polymorphism of Fats and Fatty Acids (Surfactant Science Series/31), edited by Nissim Garti and Kiyotaka Sato, 1988, 464 pp., \$150 US and Canada, \$180 elsewhere.

The following books are available from Alan R. Liss Inc., 41 East 11th St., New York, NY 10003.

Fat Distribution During Growth and Later Health Outcomes (Current Topics in Nutrition and Disease, Vol. 17), edited by Claud Bouchard and Francis E. Johnston, 1988, 374 pp., \$68.

Methods for Studying Membrane Fluidity (Advances in Membrane Fluidity, Vol. 1), edited by Roland C. Aloia, Cyril C. Curtain and Larry M. Gordon, 1988, 380 pp., \$120.

Lipid Domains and the Relationship to Membrane Function (Advances in Membrane Fluidity, Vol. 2), edited by Roland C. Aloia, Cyril C. Curtain and Larry M. Gordon, 1988, 320 pp., \$120.

Physiological Regulation of Membrane Fluidity (Advances in Membrane Fluidity, Vol. 3), edited by Roland C. Aloia, Cyril C. Curtain and Larry M. Gordon, 1988, 380 pp., \$120.