
Publications

Book reviews

Advances in Chromatography, Vol. 17, edited by J.C. Giddings, E. Grushka, J. Cazes and P.R. Brown (Marcel Dekker, Inc., 270 Madison Ave., New York, NY, 1979, 326 pp. \$36.50).

The latest volume in this series includes reviews on "Progress in Photometric Methods of Quantitative Evaluation in TLC," by V. Pollack; "Ion Exchange Packings for HPLC Separations: Care and Use," by F.M. Rabel; "Micropacked Columns in GC, an Evaluation," by C.A. Cramers and J.A. Rijks; "Reversed-Phase GC and Emulsifier Characterization," by J.K. Haken; "Template Chromatography," by H. Schott and E. Bayer; "Recent Usage of Liquid Crystal Stationary Phases in GC," by G.M. Janini; and "Current State of the Art in the Analysis of Catecholamines," by A.M. Krstulovic. In general the reviews do not include particular emphasis on lipids. HPLC of steroid hormones was covered in a recent volume (#16, 1978). Lipid chemists, if their mathematics and physical chemistry backgrounds are adequate for the style of coverage, may find the chapters on quantitative TLC and emulsifiers to be of interest. Care and use of ion exchange HPLC columns is of interest to those in the food industry but the chapter does not cite any relevant applications.

In general this book can be recommended to the analytical chemist but not particularly to the average fat and oil chemist.

Trace Organic Analysis: A New Frontier in Analytical Chemistry, National Bureau of Standards Special Publication 519, edited by H.S. Hertz and S.N. Chesler (U.S. Govt. Printing Office, Washington, DC, 1979, 788 pp., \$14).

This volume is the proceedings of the 9th Materials Research Symposium, Gaithersburg, MD, April 1978, and is divided into five sections: environmental analysis (26 papers); food analysis (15 papers); clinical analysis (15 papers); analytical systems for trace organic analysis (23 papers); and general analytical techniques (13 papers). Papers of particular interest to the lipid chemist include HPLC of vitamins E and K in foods and tissues, status of the lipoxidase method for *cis,cis*-9,12-PUFA, aflatoxin analysis and analysis of neutral lipids by HPLC. The last two sections contain considerable amounts of practical information on systems and techniques of general applicability.

Only our federal government would consider producing a volume of this size and quality for the stated price. Although of limited interest to lipid chemists, price alone justifies acquisition for the systems and techniques sections.

Liquid Chromatographic Analysis of Food and Beverages, edited by G. Charalambous (Academic Press, New York, NY, 1979, Vol. 1, 236 pp., \$16; Vol. 2, 327 pp., \$25).

According to the preface, Volume 1 was planned as a companion text to "Analysis of Foods and Beverages—Headspace Techniques" also edited by Charalambous (Academic Press, 1978). Volume 2 is derived from an ACS symposium sponsored by the Flavor Subdivision of the Agricultural and Food Chemistry Division with the addition of six chapters on theory and application of reversed-phase HPLC. The tone of the series may be judged by the titles of several chapters—"High Pressure Liquid Chromatography: Everything a Food Chemist Wanted in an Analytical Technique—and More" and "The Advantages of Reversed-Phase HPLC in the Quantitative Analysis of Foods and Beverages." Nine of the 26 chapters have authors associated with HPLC instrument manufacturers and there is a tendency to extol specific instrument features as being of particular value to the analyst. Some balance is achieved by inclusion of the chapter, "A Guide to HPLC Instrument Selection in the Food Science Laboratory." Separations covered include amino acids, capsaicins, aflatoxins, patulin, coumestrol, anthocyanins, vitamins, Amadori compounds, gluconic acid, dextromethorphan, hop compounds, low molecular weight polymers and polymethoxylated flavones. Four chapters consider carbohydrate separations ranging from monosaccharides to starch hydrolysates. The general chapters include illustrative examples of numerous other separations ranging through essential oils, sulfonamides, mycotoxins, pesticide residues and phenolic acids.

When the two volumes are viewed as a unit the sequence of topics covered is rather haphazard and erratic. On balance, however, coverage is reasonable and of good quality. The beginner can locate introductory material regarding both equipment and separations and the experienced chromatographer will find a convenient collection of related analyses. Lipids (except fat-soluble vitamins) are largely ignored but this is representative of the state of the art. The two volumes are paginated sequentially and the rather brief index is included in Volume 2. Although prepared from camera-ready copy, the text is clear and the figures are of good quality. HPLC is a rapidly growing area and these 2 volumes should be required reading for anyone in the food industry.

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