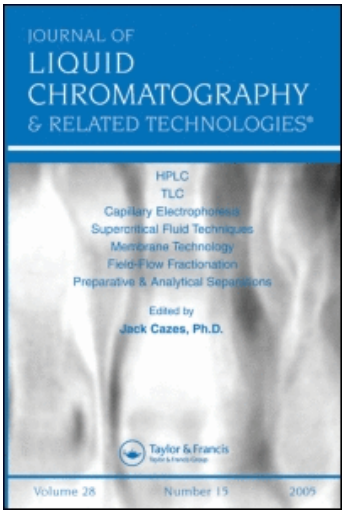

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The Book Conner

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THE BOOK CORNER

CHROMATOGRAPHY AND ISOLATION OF INSECT HORMONES AND PHEROMONES, A. R. McCaffery and I. D. Wilson, Editors, Chromatographic Society Symposium, Plenum Press, New York and London, 1990, 376 pages. $89.50; prices 20% higher outside USA and Canada.

This volume represents the outcome of a joint international symposium organized by the Chromatographic and Royal Entomological Societies at the University of Reading between the 21st and 23rd March 1989 aimed specifically at discussing the chromatography and isolation of insect hormones, pheromones and related substances. The papers presented at that meeting, and collected together here, covered many aspects of the subject including the chromatography of juvenile hormones, ecdysteroids, peptides, pheromones and semiochemicals.

Almost every area of chromatography was discussed, including GLC, HPLC, TLC, SFC, CZE and electrophoresis, with the separations described often of an impressively high standard. Many authors have devised novel combinations of separation and detection or coupled separative techniques to improve resolution. Together with modern immunological, molecular and sequencing techniques the science of insect hormone and pheromone isolation has identified many active materials.

The book is divided into major topics including juvenile hormones (5 chapters), ecdysteroids (8 chapters), peptides (11 chapters), pheromones (10 chapters) and one chapter on pattern recognition. This book is recommended to analytical chemists in general and specifically to those interested in the study of insects' behavior and biochemistry where chromatography has been an essential tool of isolation and quantification in these studies.

Reviewed by

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COUNTERCURRENT CHROMATOGRAPHY: APPARATUS, THEORY, AND APPLICATIONS,
W. D. Conway, VCH Publishers, Inc., New York, 475 pages.

Countercurrent Chromatography (CCC) is defined as a form of liquid-liquid chromatography in which centrifugal or gravitational force is employed to maintain a bed of one liquid phase in a coil or train of chambers, in the absence of a porous supporting matrix, while a stream of a second, immiscible phase is passed through the system in contact with the stationary phase. There is no adsorption, so that retention depends only on the phase volume ratio and the partition coefficient of the solute.

This technique has gained popularity in the last decade, especially in the pharmaceutical industry and for the separation of natural products in the milligram range. The book presents a comprehensive summary of both the development of instrumentation and applications.

The book is divided into 10 chapters which are, according to the author, "self contained". The first chapter introduces the reader to CCC, the next two chapters deal with the concept and evolution of CCC. Chapters 4, 5 and 6 deal with principles and theory of CCC and comparison with chromatography. Chapter 7 deals with the solvent systems that are used in CCC. Chapter 8 discusses types of CCC, while chapter 9 introduces the expeirmentalist into the use of CCC. Applications are given in chapter 10. The book is easy to read and well written. It is recommended to all those novel and users of CCC.

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PRACTICAL MANUAL ON LIPID ANALYSIS: PART I. FATTY ACIDS, J. G. Alvarez & J. C. Touchstone, 104 pp., Norell Press, 22 Marlin Lane, Mays Landing, NJ 08330, USA, 1991.

Interest in analysis of lipids has grown during the past several years. Published procedures for assaying lipids are to be found scattered among a broad range of scientific literature. An up-to-date compilation of methodologies in a single, readily accessible monograph has not appeared in print until now. Numerous sources must be scanned to obtain the information needed to effectively perform an assay or a characterization of lipids in complex matrices.

This series of monographs is intended to bring together as much information as possible about individual compounds, their identification and their quantification. The series will include the following monographs:

Volume I. Fatty Acids
Volume II. Glycolipids
Volume III. Phospholipids
Volume IV. Acylglycerols
Volume V. Fats & Oils
Volume VI. Steroids: Androgens
Volume VII. Steroids: Corticoids
Volume VIII. Steroids: Estrogens
Volume IX. Steroids: Cholesterol-Cholestanes
Volume X. Steroids: Insect & Plant Steroids

Each volume is organized in a dynamic sequential order. **Sample preparation** is presented first, followed by a detailed description, in stepwise fashion, of procedures for **sample isolation** and **purification**. **Characterization** and **quantification** must then follow. Each monograph in the series will include a chapter on current lipid nomenclature for the lipid class covered, in accordance with IUPAC-IUB recommendations. An appendix presents a compilation of available spectroscopic and physical properties for individual compounds.

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4. Separation & Quantification
   - High Performance Thin Layer Chromatography (HPTLC)
   - Centrifugal Partition Chromatography (CPC)
   - High Performance Liquid Chromatography (HPLC)
   - Gas Chromatography (GC)

5. Physico-Chemical Characteristics

This monograph contains valuable information that is useful and practical. Specific procedures are concise, yet clear and complete. All procedures contained in this volume have been carefully tested; success is assured.

This reviewer highly recommends this volume, without reservation, to be kept on a researcher's desk where it will serve as a primary reference, day . . . after day . . . after day. It is required reading for anyone who works with fatty acids. Let us hope the information in future volumes of this series will be as voluminous and practical as in this first volume.

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June 18, 1991