
BOOK REVIEW

Encyclopedia of Chromatography

(Cazes, J., ed., Marcel Dekker, New York-Basel, 2001, 997 p., \$335)

This book continues a series of encyclopedias published by Marcel Dekker. Although this book formally belongs to an encyclopedic series, it represents a logical continuation of a large number of publications on chromatography issued by this publisher. Most of these issues were published within a "Chromatographic Science Series", which now (August, 2003) includes more than 89 books covering various aspects of chromatography. Some of these books have been reviewed by *Biochemistry (Moscow)*, e.g., "Quantitative Chromatographic Analysis" (*Biochemistry (Moscow)* (2002) 67, No. 3). Others (such as "Thin-Layer Chromatography", 4th edn. (Fried, B., and Sherma, J., eds.) (1999) Marcel Dekker) have not been reviewed by this journal, but nevertheless many experts and researchers (including your reviewer) working in different fields already appreciated these books, which have become desk reference books in many laboratories all over the world.

Interestingly, the Editor of "Encyclopedia of Chromatography", Dr. Jack Cazes, is the Editor of the "Chromatographic Science Series" and also the scientific consultant of many journals specialized in analytical and preparative biochemistry, and also liquid chromatography. He is one of the pioneers in the development of modern HPLC technology. Perhaps, his long-term "involvement in chromatography" for more than the four last decades (Americans say "almost 40 years in business") helped him to collect material for the "Encyclopedia" from 223 authors from 29 countries including Russia.

The relatively short (for an encyclopedia) one volume book contains more than 300 chapters devoted to various aspects of high performance liquid chromatography, thin layer and gas chromatography, capillary electrophoresis, affinity chromatography, and many other variants of chromatographic separation and analysis of various natural and synthetic compounds.

All materials are positioned in the book according to alphabetical order of key words. However, each key phrase also includes related data. For example, section C contains a chapter "Capillary electrochromatography. An introduction". It actually includes the introduction, short historical background on the development of this method, limits of its application, instrumental equipment, including detection and column types. Special short subsections deal with regions of application of this

method, possible problems, and future perspectives of this method. This chapter ends with a list of references covering key problems discussed by the authors. This C section also contains other chapters on capillary electrophoresis written by other authors. A reader might suggest that all information on capillary electrophoresis is accumulated within this particular section, however this is not the case. In the section B, we find the chapter "Buffer systems for capillary electrophoresis", which contains characteristics of many buffers and their modifications (additions). This information may help to get some useful effects (e.g., complex formation, increase in solubility, hydrophobization, etc.). In section C, key word "carbohydrates", the reader will find several articles "Carbohydrates as affinity ligands", "Carbohydrates: analysis by capillary electrophoresis", "Carbohydrates: analysis by TLC; a new method of detection".

These examples demonstrate the main and very convenient tendency of this book: to provide the widest information on each key word using materials from various groups of authors. This tendency can be easily seen in all sections of this book. The range of ideas considered in the book is very wide. The book is based on materials of 2600 experimental and review articles, which include about 1000 figures, equations, tables, and photos. Author index and bibliography accompanying each paper help the reader to find rapidly all necessary information on any variant of chromatography, electrophoresis, and related methods for separation.

As the Editor states in the preface, this book does not pretend to be an exhaustive handbook on chromatography. However, the "Encyclopedia" gives experts and beginners a good basis for subsequent development of chromatographic methods and their practical applications in various basic and applied studies.

The "Encyclopedia" is a valuable desk book for specialists in various fields: analytical chemists and biochemists, bioorganic chemists, biotechnologists, molecular biologists, and specialists in proteomics and biotechnology. It should be recommended for teachers and students specializing in the above-motivated fields.

Interestingly, on buying a hardcopy each specialist gets annual free access to the Web site at which the "Encyclopedia of Chromatography" will be periodically supplemented with new articles.

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