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Journal of Chromatography A, 775 (1997) 381

JOURNAL OF CHROMATOGRAPHY A

Book review

Liquid Chromatography of Oligomers (Chromatographic Sciences Series, Vol. 72), by V. Uglea; Marcel Dekker, New York, 1996, VI+344 pp., Price US$ 150.00 ISBN 0-8247-9720-5

The work consists of four chapters, the first small chapter is entitled Definition, History and Nomenclature. This mainly concerns the history of the introduction of chromatographic procedures and largely concerns development in Eastern European Cultures. The treatment, while interesting, has little connection with chromatography of oligomers. The concluding section of the chapter concerns oligomer nomenclature and classification and details of telechelic polymers of varying functionality and with various pendant groups.

Chapter 2 is entitled Molecular Nonhomogenity of Synthetic Oligomers and is again a relatively short chapter. It indicates that molecular species forming oligomeric mixtures differ through their molecular mass, chemical composition and functionality. The development of the concept of functionality, its experimental determination by the gel-point method and crosslinking density method are included with the effect of functional groups of unequal reactivity being considered. It is evident that the developments reported have not been recently reported as the latest reference appeared more than a decade ago.

Chapter 3 entitled Liquid Chromatography forms almost two thirds of the book with most pages detailing firstly the theoretical basis of liquid chromatography followed by the various bonded phases – i.e. silica, alumina, polymeric based resins, carbon – then column performance and optimisation. Analytical and preparative HPLC,equipment, ovens, detectors are included, all material treated elsewhere in many texts and trade publications. The actual separation of oligomers is shown in the final table of the chapter where some 50 references – largely from the 1970's and 1980's – and almost 40 types of oligomers are listed.

The final chapter entitled Gel Permeation Chromatography forms almost a quarter of the work. The pattern of chapter 3 is followed with the majority of the chapter describing the theoretical and operational techniques of gel permeation chromatography, all material treated elsewhere. Selected applications proceed a tabulation of GPC. Applications of natural and synthetic oligomers and polymers relating to the analysis of about 50 materials are described in 180 references and largely relate to reports appearing in the 19070's and 1980's but include some references up to 1992.

The work is well written with few errors but a minimal amount of the contents actually refers to the chromatography of oligomers and experimental details are absent. As is common with many Eastern European Volumes the bibliography is very dated and up to date practice is not included. It is doubtful if those concerned with the chromatography of oligomers will increase their knowledge by a study of this work.

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PII S0021-9673(97)00323-3