

## Book Reviews

**D.S. Hage, editor. Handbook of Affinity Chromatography, 2nd ed., CRC Press/Taylor and Francis Group, Boca Raton/FL, USA, 2006 (xix + 944 pp., £115.00, ISBN 0-8247-4057-2)**

Chemical separation is an essential component of modern research and is widely used to process complex samples. Liquid chromatography has become popular method for these separations because of its ability to work with a wide range of substances. When combined with appropriate support materials, this technique can be used in either high-performance separations for chemical detection and measurement or in systems designed to purify a desired product. One of the most versatile forms of liquid chromatography is the technique known as affinity chromatography, which can generally be defined as a liquid chromatographic technique that uses a specific binding agent for the purification or analysis of sample components. The *Handbook of Affinity Chromatography* provides information on the theory, applications, and practical use of affinity chromatography in different fields of science and technology.

The contents of the book are divided into six sections. An overview of affinity chromatography is given in Section I, and important factors to consider in the development of affinity methods including support materials, immobilization methods and application or elution conditions are discussed. Section II is focussed on the general affinity ligands and methods and it reviews the information on bioaffinity chromatography, immunoaffinity chromatography, DNA affinity chromatography, boronate affinity chromatography, dye-ligand and biomimetic affinity chromatography, and immobilized metal-ion affinity chromatography.

The preparative applications, analytical and semipreparative applications, and biophysical applications in various areas such as biochemistry, molecular biology, biotechnology, clinical testing, pharmaceutical, and environmental analysis are discussed in the Section III, IV and V of the book. Section VI is focussed on the recent developments in the field, including the affinity ligands in capillary electrophoresis, affinity mass spectrophotometry, microanalytical methods, chromatographic immunoassays, and molecularly imprinted polymers.

The book provides the latest information on the theory and practical use of affinity chromatography. The topics are well illustrated and range from fields of biochemistry, molecular biology and biotechnology to analytical chemistry, pharmaceutical and environmental science. This handbook can be an excellent source of information not only to the students but also to the persons involved in research and academia.

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**P.F. Fox, P.L.H. McSweeney, T.M. Cogan and T.P. Guinee, editors. Cheese: chemistry, physics and microbiology 3rd ed. Vol. 1, General aspects, Vol. 2, major cheese groups Vol. 1, Elsevier Academic Press, London, UK, 2004 (xvii + 1051 pp., £249.95, ISBN, Vol. 1, 0-12-263652-X; Vol. 2, 0-12-263653-8; Vol. Set 0-12-263651-1)**

Cheese is the most diverse group of dairy products and is produced in a wide range of flavours and forms throughout the world. While many dairy products, if properly manufactured and stored, are biologically, biochemically, chemically and physically very stable, cheeses in contrast, biologically and biochemically dynamic and consequently are inherently unstable. Although cheese making is an ancient art, modern cheese production relies on the application of much science and technology, including the use of induced enzymes, complex fermentations, sophisticated engineering and a dynamic biochemistry during ripening. Thus, researchers have created a very substantial literature on the different aspects of cheese technology. The third edition of *Cheese: Chemistry, Physics and Microbiology* covers the different scientific aspects of cheese and is available in two volumes entitled 'General Aspects' and 'Major Cheese Groups'.

Volume 1 provides information on the rennet and acid coagulation of milk and the properties of the acid coagulated milk gels, microbiology and genetics of starter cultures, microbiological aspects of cheese ripening, biochemistry of cheese ripening and characterization of cheese flavour. Consumer awareness about the food products has increased in recent years. Therefore, the topics of rheology and texture, nutritional aspects of cheese and sensory analysis of cheese have also been discussed in the book.

A great diversity of cheeses are produced from the same raw materials. Volume 2 is focussed on the various types of cheese, and the cheeses are grouped on the basis of their characteristics.