

probe and the impact in diagnostic microbiology are discussed in Part III.

This book is directed at the end users of the products of biotechnology for the rapid identification of pathogenic microorganisms such as: clinical laboratory and public health laboratory microbiologists, clinicians, personnel and managers of industrial microbiological quality control laboratories. Also, students and researchers involved in this field should find it to be a useful reference.

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**Fermentation — A Practical Approach.** Edited by B. McNeil and L. M. Harvey, IRL Press, Oxford, 1990. 226 pp.; price £19.00; ISBN 0-19-963045-3.

A great majority of industrial fermentation companies have a research and development section dedicated to laboratory fermentation. These laboratories are used for pure research for new products, screening for new fermentation cultures, developing new raw materials for fermentation, process trouble-shooting, and scale-up. Examples are to be found in the pharmaceutical industry where new antibiotics are developed, in the

brewing industry, or in the food industry where new fermented foods such as protein substitutes are developed.

*Fermentation — A Practical Approach* brings together useful information, for newcomers in the field, on laboratory scale practical applications including relevant theoretical considerations. The set of nine chapters vary in content and style, but have been organised so that each can be read in isolation, depending on the interest of the reader.

The opening chapter, by B. McNeil and L. M. Harvey, provides a general description on the setting up of a laboratory for fermentation. The chapter written by T. Irvine covers a useful discussion on different types of laboratory fermentors. The seven remaining chapters include strain preservation, inoculum preparation and inoculum development; fermentation modelling, fed-batch and continuous culture; pH, dissolved oxygen and related sensors; instrumentation and control; sterilization; and animal cell fermentation.

This book will prove most useful to those new to fermentation and will add to the practical capabilities to those involved in the field of biotechnology.

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