Biotechnology: A Textbook of Industrial Microbiology

by W. Crueger and A. Creuger


308 pages. £24.50

This book provides a complete cover of the microbiological basis of industrial fermentation processes. An introductory section deals with microbial genetics covering strain development, metabolite screening and genetic engineering applications. An understanding of basic biochemistry appears to be assumed and the fundamental aspects of the biochemistry and regulation of cell metabolism are not considered. Growth kinetics precede discussion of fermentation systems which are treated in standard chemical engineering terms of stirring, gaseous exchange, mass transfer, etc. The level of presentation should be readily understood by the non-engineering qualified reader although the section of instrumentation and computer control is too brief and non-specific to be of real value.

The bulk of the remaining text, about two-thirds of the book, is a concise review of current industrial microbiological fermentation processes. Commercially important microbial biosynthetic pathways, fermentation conditions and product processing are systematically dealt with for the range of biofermentations covering organic and amino acids, enzymes and vitamins, antibiotics and single cell protein. This section of the book contains many examples of fermentations which are illustrated by well-chosen relevant data.

Antibiotic production naturally receives the most extensive treatment. Typically, each group of antibiotics is considered systematically in terms of sources, mode of action, biosynthesis and regulation, strain development and production methods.

Most references in the book refer to publication between 1975–1983 which is reasonable given that the authors regard the book primarily as a student-orientated textbook.

The book concludes with a review of sewage treatment, leaching and a consideration of future developments in biotechnology.

In general the book covers industrial microbiological aspects of biotechnology in a brief but concise manner. There may have been room for expansion of certain topics, it is clearly difficult to present chemical engineering aspects of large scale fermentation in 30 pages of text, and some topics have received scant treatment, e.g., principles of multivariant computer control of fermentation processes.

However, within the 305 pages the authors have successfully filled a library requirement in providing an excellent up-to-date textbook covering an increasingly important subject.

To paraphrase the Editor of this English translation, I can recommend this book “not only to students... but also to research scientists... and industrial microbiologists” who seek a clear and concise presentation of the key principles and major processes of industrial microbiology.

The book as supplied to the reviewer cost £24.50 in hard cover. Since it is clearly student orientated one hopes that an appropriately priced edition may be forthcoming in the near future. It would be welcomed.

G.H. Fynn
Microbiology and Biotechnology: An Historical Chapter 2 Microbiology of Industrial Fermentation: Central Fermentations and Biotechnology: The Next Generation of Genetic Engineering. 622 Pages·2016·11.96 MB·5,265 Downloads. Chapter 3 Plant molecular biotechnology: Applications of transgenics. 61. A FOODSCIENCEANDTECHNOLOGY ASeriesofMonographs,Textbooks,andReferenceBooks EDITORIALBOARD Food Lipids: Chemistry, Nutritio Plant Development and Biotechnology. 348 Pages·2008·29.45 MB·4,317 Downloads. The Biotechnology: A Textbook of Industrial Microbiology: breadth of the articles printed was commendable and encompassed biology passed humanities and science subject areas. Pedagogic principles were generally well discussed and well referenced in the book by Wulf Crueger and Anneliese Crueger. Editor of the articles so the reader could springboard to other sources. The This programme commences with a description of the types of principles on which the whole of industrial microbiology rests are literature database available (journals, abstracting journals, etc) clearly defined in this book. The present edition is the and goes on to show how to set up a search the topic of which is translation of German language edition published in 1989. Enter your mobile number or email address below and we'll send you a link to download the free Kindle App. Then you can start reading Kindle books on your smartphone, tablet, or computer - no Kindle device required. Apple. A Biotechnology: A Textbook of Industrial Microbiology (English and Danish Edition) Subsequent Edition by Wulf Crueger (Author).