Microbial Enzymes and Biotechnology, edited by WILLIAM M. FOGARTY, Applied Science Publishers, London, 1983, xiii + 382 pages, £34.

Microbial Enzymes and Biotechnology is devoted to reviewing recent advances in the production and uses of enzymes of industrial importance, and the development of new enzymological processes, subjects that form one of the most significant areas of new achievement in biotechnology. The volume consists of seven chapters contributed by eminent workers in the subject, and covers topics on microbial amylases, D-glucose-transforming enzymes, pectic enzymes, cellulases, extracellular lipases, proteinases, enzyme-synthesis regulation, and the enzyme-secretion processes of micro-organisms.

The first six chapters of this book contain comprehensive information on the sources and types of enzymes, and detailed methodology for the fermentative production, isolation, and purification of enzymes. Enzyme-estimation techniques, modes of enzyme action, industrial applications of enzymes, and recent advancements in enzyme technology are also given considerable attention. Sections and subsections in each chapter are clearly written, with illustrative Tables, diagrams, and Figures, wherever required, to make understanding easy from both an academic and an industrial viewpoint. Each section has a detailed, reference section that includes recent references, an indication of the throughness of the treatment.

Dr. Fogarty has himself contributed a chapter on microbial amylases, providing a thorough review of the subject and of such related, recent technological developments as the use of immobilized amylases for the continuous, fermentative degradation of starch to low-molecular-weight carbohydrates of significant food-value. Dr. Priest, in his contribution to this volume, discusses the molecular basis of enzyme synthesis, enzyme regulation (induction and repression), and secretion by the producing organisms. He has also assessed the potentials of genetic manipulation of the producing organisms, further to enhance the productivity and the commercial viability of enzymes for their industrial uses.

This book should be of significant help, not only to establish workers, but also to beginners and degree students in biotechnology, industrial micribiology, and biochemistry. The only limitation of the volume is that, except for Dr. Fogarty's contribution on immobilized amylases, only very limited information on the use, for industrial processes, of immobilized catalysts (one of the major achievements of biotechnology in recent years) is provided in the other chapters, but this criticism does not prevent the reviewers from recommending this book.

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