

Offers a comprehensive and practical guide to the field of enzymology

The highly anticipated, expanded, third edition of the classic book on practical enzymology includes new, lab-tested assays for more than 30 enzymes across all enzyme classes. This brings the total up to 150 assay protocols for more than 110 different enzymes. The book also contains a new section on the determination of enzyme-bound metal ions and covers special cases such as multi-enzyme complexes, binding measurements, and immunoassays.

Practical Enzymology, 3rd Edition is composed of two main parts—a general introduction into working with enzymes and a practical part including step-by-step protocols for assaying enzymes, including methods for protein determination and enzyme immobilization. The book also addresses spectroscopic methods, electrochemical methods, radioactive labeling and other instrumental methods. The chapters part of the experimental section systematically cover assays for oxidoreductases; transferases; hydrolases; lyases; isomerases; and ligases (synthetases). Later chapters provide in-depth coverage of multienzyme complexes assays, enzyme relevant parameters, and enzyme immunoassays. The book finishes with two sections that look at binding measurements and methods, and enzymes in technical applications, including the methods and modes for immobilized enzymes.

- Expanded with 30 new assays
- Includes a new section on metal ion determination
- Contains 150 ready-to-use assay protocols for the determination of the 110 most important enzymes
- Presents every assay in a user-friendly format filled with sage advice on the precise amounts of chemicals for the assay solutions, the correct formulae for calculating enzyme activity, and more
- Covers special cases, such as multienzyme complexes, binding measurements, and immunoassays

With its proven concept of concise and ready-to-use laboratory protocols, coupled with the necessary background information for successful experimentation and interpretation of the results, *Practical Enzymology, 3rd Edition* will be a life-long companion for every enzymologist.

Hans Bisswanger, PhD, was Professor at the Interfaculty Institute of Biochemistry at the University of Tübingen (Germany), where he developed and taught an intensive course on enzyme kinetics, enzyme technology, and ligand binding. His scientific interest lies with structural and regulatory mechanisms of multi-enzyme complexes, thermophilic enzymes, and the technical application of immobilized enzymes. He is the author of several well-known books on enzymology that have appeared in different languages and editions.