

## **Enzymes Second Edition Biochemistry Biotechnology**

Each entry includes nomenclature, source organism, reaction and specificity, enzyme structure, isolation / preparation / mutation / application, stability, and literature references for each enzyme.

EC 1.1.1.1 - 1.1.1.50

Biochemistry and Biotechnology

Class 1 Oxidoreductases XII

EC 3.5.4 - 3.12.1

Class 3.2 - 3.5 Hydrolases IX

EC 1.14.15 - 1.97

EC 1.6 - 1.8

EnzymesBiochemistry, Biotechnology, Clinical  
ChemistryElsevier

EC 1.1.1.51 - 1.1.1.154

Class 1 Oxidoreductases II

EC 4.1.1 - 4.1.2

EC 1.3

EC 4.2.2 - 4.99

EC 2.3.1.60 - 2.3.3.15

Class 2 Transferases VI

*Enzymes in Food Biotechnology: Production, Applications, and Future Prospects* presents a comprehensive review of enzyme research and the potential impact of enzymes on the food sector. This valuable reference brings together novel sources and technologies regarding enzymes in food production, food processing, food preservation, food engineering and food biotechnology that are useful for researchers, professionals and students. Discussions include the process of immobilization, thermal and operational stability, increased product specificity and specific activity, enzyme engineering, implementation of high-throughput techniques, screening to relatively unexplored environments, and the development of more efficient enzymes. Explores recent scientific research to innovate novel, global ideas for new foods and enzyme engineering Provides fundamental and advanced information on enzyme research for use in food biotechnology, including microbial, plant and animal enzymes Includes recent cutting-edge research on the pharmaceutical uses of enzymes in the food industry

Class 1 Oxidoreductases VIII

EC 1.5

Class 3.1 Hydrolases VI

Class 2 Transferases

*Class 1 . Oxidoreductases III*

*Class 2 Transferases III*

*Enzymes*

**Proteins Biochemistry and Biotechnology 2e** is a definitive source of information for all those interested in protein science, and particularly the commercial production and isolation of specific proteins, and their subsequent utilization for applied purposes in industry and medicine. Fully updated throughout with new or fundamentally revised sections on proteomics as, bioinformatics, protein glycosylation and engineering, well as sections detailing advances in upstream processing and newer protein applications such as enzyme-based biofuel production this new edition has an increased focus on biochemistry to ensure the balance between biochemistry and biotechnology, enhanced with numerous case studies. This second edition is an invaluable text for undergraduates of biochemistry and biotechnology but will also be relevant to students of microbiology, molecular biology, bioinformatics and any branch of the biomedical sciences who require a broad overview of the various medical, diagnostic and industrial uses of proteins. • Provides a comprehensive overview of all aspects of protein biochemistry and protein biotechnology • Includes numerous case studies • Increased focus on protein biochemistry to ensure balance between biochemistry and biotechnology • Includes new section focusing on proteomics as well as sections detailing protein function and enzyme-based biofuel production "With the potential of a standard reference source on the topic, any molecular biotechnologist will profit greatly from having this excellent book. " (Engineering in Life Sciences, 2004; Vol 5; No. 5) "Few texts would be considered competitors, and none compare favorably." (Biochemistry and Molecular Education, July/August 2002) "...The book is well written, making it informative and easy to read..." (The Biochemist, June 2002)

**Class 1 Oxidoreductases VI**

**Class 2 Transferases IV**

**Enzymes: Biochemistry, Biotechnology, Clinical Chemistry, 2nd Ed.**

**EC 4.1.3 - 4.2.1**

**EC 3.4.21 - 3.4.22**

**Class 1 Oxidoreductases X**

Rev. ed. of: Elsevier's integrated biochemistry / John W. Pelley. c2007.

**EC 2.4.1.1 - 2.4.1.89**

**EC 3.4.1 - 3.4.19**

**Enzymes in Food Biotechnology**

**Class 3.2 Hydrolases VII**

**EC 3.2.1.1 - 3.2.1.47**

**2.4.2.1 - 2.5.1.30**

**EC 3.1-3.4.21**

In recent years, there have been considerable developments in techniques for the investigation and utilisation of enzymes. With the assistance of a co-author, this popular student textbook has been updated

to include techniques such as membrane chromatography, aqueous phase partitioning, engineering recombinant proteins for purification and due to the rapid advances in bioinformatics/proteomics, a discussion of the analysis of complex protein mixtures by 2D-electrophoresis and RPHPLC prior to sequencing by mass spectroscopy. Written with the student firmly in mind, no previous knowledge of biochemistry, and little of chemistry, is assumed. It is intended to provide an introduction to enzymology, and a balanced account of all the various theoretical and applied aspects of the subject which are likely to be included in a course. Provides an introduction to enzymology and a balanced account of the theoretical and applied aspects of the subject Discusses techniques such as membrane chromatography, aqueous phase partitioning and engineering recombinant proteins for purification Includes a discussion of the analysis of complex protein mixtures by 2D-electrophoresis and RPHPLC prior to sequencing by mass spectroscopy

Proteins

EC 1.9 - 1.13

EC 1

EC 3.4.23 - 3.4.99

Class 1 Oxidoreductases VII

Biochemistry, Biotechnology, Clinical Chemistry

Class 2 Transferases I

*The Springer Handbook of Enzymes provides concise data on 4,457 enzymes – and here is the second, updated edition. The enzymes are sufficiently well characterized for application in analytical, synthetic and biotechnology processes as well as in food industry. Data sheets are arranged in their EC-Number sequence. The new edition reflects considerable progress in enzymology: the total material has more than doubled, and the complete 2nd edition consists of 39 volumes plus synonym index.*

*Class 4 Lyases I*

*Elsevier's Integrated Review Biochemistry*

*Class 3.4 Hydrolases I*

*Class 2 Transferases V*

*Class 3.4 Hydrolases III*

*EC 2.1-2.7.10*

*Class 4 Lyases II*

Springer Handbook of Enzymes details some 5,000 enzymes, each sufficiently well characterized. Their application in analytical, synthetic and biotechnology processes as well as in food industry, and for medicinal treatments is added.

Class 6: Ligases

EC 2.1.2.1 - 2.3.1.59

Class 1 Oxidoreductases I

Production, Applications, and Future Prospects

Class 3.5. - 3.12 Hydrolases X

Class 4 Lyases III

Class 3 Hydrolases

The Springer Handbook of Enzymes provides concise data on some 5,000 enzymes sufficiently well characterized – and here is the second, updated edition. Their application in analytical, synthetic and biotechnology processes as well as in food industry, and for medicinal treatments is added. Data sheets are arranged in their EC-Number sequence. The new edition reflects considerable progress in enzymology: the total material has more than

doubled, and the complete 2nd edition consists of 39 volumes plus Synonym Index. Starting in 2009, all newly classified enzymes are treated in Supplement Volumes.

EC 2.1.1

EC 1.1.1.155 - 1.1.1.274

EC 1.4

Class 1 Oxidoreductases IX

EC 2.7.11.1-2.7.11.16

Enzymes:Biochemistry,Biotechnology

EC 3.4.22-3.13