Methods in Enzymology

Volume 161

Biomass

Part B
Lignin, Pectin, and Chitin

EDITED BY

Willis A. Wood

THE SALK INSTITUTE BIOTECHNOLOGY/INDUSTRIAL ASSOCIATES, INC.
SAN DIEGO, CALIFORNIA

Scott T. Kellogg

THE SALK INSTITUTE BIOTECHNOLOGY/INDUSTRIAL ASSOCIATES, INC.
SAN DIEGO, CALIFORNIA

ACADEMIC PRESS, INC.
Harcourt Brace Jovanovich, Publishers
San Diego New York Berkeley Boston
London Sydney Tokyo Toronto

ACADEMIC PRESS, INC.
San Diego, California 92101

United Kingdom Edition published by
ACADEMIC PRESS, INC. (LONDON) LTD.
24-28 Oval Road, London NW1 7DX

LIBRARY OF CONGRESS CATALOG CARD NUMBER: 54-9110

ISBN 0-12-182062-9 (alk. paper)

PRINTED IN THE UNITED STATES OF AMERICA
88 89 90 91 9 8 7 6 5 4 3 2 1

Table of Contents

Section I. Lignin

A. Preparation of Substrates for Ligninases

B. Assays for Ligninases

C. Chemical Methods for Characterization of Lignin

D. Chromatographic Methods for Lignin and Related Compounds

E. Nucleic Acid Preparations Related to Lignin Degradation

F. Purification of Lignin-Degrading Enzymes

Section II. Pectin

A. Assays for Pectin-Degrading Enzymes

B. Purification of Pectin-Degrading Enzymes

Section III. Chitin

A. Preparation of Substrates for Chitin-Degrading Enzymes

B. Assay for Chitin-Degrading Enzymes

C. Analytical Methods for Chitin

D. Purification of Chitin-Degrading Enzymes