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BIOPROCESSING OF RECOMBINANT E.COLI PRODUCING β-GLUCURONIDASE ENZYME

IIUM Press
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011

Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

Bioprocessing Of Recombinant E.Coli Producing β- Glucuronidase Enzyme
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Include Index

ISBN 978-967-418-010-2

Member of Majlis Penerbitan Ilmiah Malaysia - MAPIM
(Malaysian Scholarly Publishing Council)

Printed by:
IIUM PRINTING SDN. BHD.
No. 1, Jalan Industri Batu Caves 1/3,
Taman Perindustrian Batu Caves,
Batu Caves Centre Point,
68100 Batu Caves.
Selangor Darul Ehsan

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Batch Fermentation of Recombinant *Escherichia coli* producing β-Glucuronidase using Different Control Conditions

Mohd Ismail Abdul Karim, Hamzah Mohd Salleh and Maizirwan Mel

1. Introduction

β-Glucuronidase, the enzyme responsible for the degradation of various polysaccharides or the cleavage of glucurono-conjugates, is widely distributed in animal, plants, insects and bacteria, with particularly high concentrations in liver found in animals. It catalyzes the hydrolysis of β-Glucuronidase conjugates to yield aglycone and free glucuronic acid.

E. coli is classified as non-photosynthetic and mesophiles bacteria (Wang and Touster, 1972). There are hundreds of different types of *E. coli* recognized by the combination of sugars and proteins displayed on the bacterial surface (Christner et al., 1970). *E. coli* bacteria have long rods without separation when grown under limited conditions.

There are several advantages of using recombinant *E. coli* for protein synthesis. It is one of the most-studied organisms used for recombinant protein synthesis (Himeno et al., 1974) and its genetics