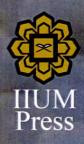
BIOPROCESSING OF LACTIC ACID BY FERMENTATION TECHNIQUE

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Published by: IIUM Press International Islamic University Malaysia

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Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Maizirwan Mel
Bioprocessing of Lactic Acid by Fermentation Technique / Maizirwan Mel ... [et al.].
978-967-418-093-5

ISBN 978-967-418-093-5

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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Chapter 3

Optimization of Media for Lactobacillus rhamnosus Fermentation for Lactic Acid Production

Maizirwan Mel, Mohamed Ismail Abd Karim, Mohammad Ramlan Mohammad Salleh, Noraini Alamin Mohammad Amin

Abstract

This chapter discussed about the media optimization of *Lactobacillus* rhamnosus for the fermentation process to produce lactic acid which were conducted in the shake flask. In this experiment, glucose and peptone content of media were optimized using the Central Composite Design (CCD) method via STATISTICA software. The optimization studies were carried out in shake flask experiments. The results indicated the optimum concentration of glucose and peptone for optimum bacterial growth rate and lactic acid production in shake flask were 9.80 and 9.98 g L⁻¹, respectively. The optimum productivity of lactic acid was 0.630 g g⁻¹ h which correspond to optimize growth rate of the bacteria.

Keywords: Lactobacillus rhamnosus, lactic acid, media optimization, fermentation, CCD methods