

VENUE

Laboratory of Biopolymer and Derivatives (BADs)
Institute of Tropical Forestry and Forest Products
Universiti Putra Malaysia
43400 UPM Serdang, Selangor

WORKSHOP SECRETARIAT

Laboratory of Biopolymer and Derivatives (BADs)
Institute of Tropical Forestry and Forest Products
Universiti Putra Malaysia
43400 UPM Serdang
Selangor
Telephone : 03 - 8946 7010 / 7009
E-mail: ainun.introp@gmail.com
nazlia82@gmail.com
Attn: **Dr. Ainun Zuriyati Asa'ari/Pn. Nazlia Girun**

FEES AND REGISTRATION

Student	RM 500
Government Agency	RM 550
Private Agency	RM 600

Registration fee covers the workshop materials, breakfast, refreshment breaks and lunches. The fee may be paid by bank draft, cheque or money order, payable to 'Bendahari UPM'. Please send the payment slip and registration form to the Workshop Secretariat.

APPLICATION FORM

Complete the following form and email to
rsmupm@gmail.com

or

fax to **03 - 89471896**

RESPONSE SURFACE METHODOLOGY IN BIOPROCESS 6th - 7th June 2012

Name (with title) : _____

Organisation / Institution : _____

Address : _____

Postal Code : _____

City : _____

Telephone : _____

Email : _____

Mode Payment :

- Bank Draft
- Cheque
- Money Order
- Jurnal

Category :

- Student
- Government Agency
- Private Agency

WORKSHOP: RESPONSE SURFACE METHODOLOGY IN BIOPROCESS 6th - 7th June 2012

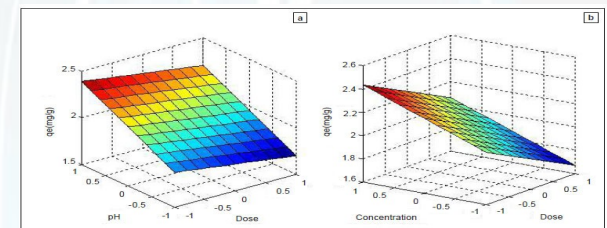
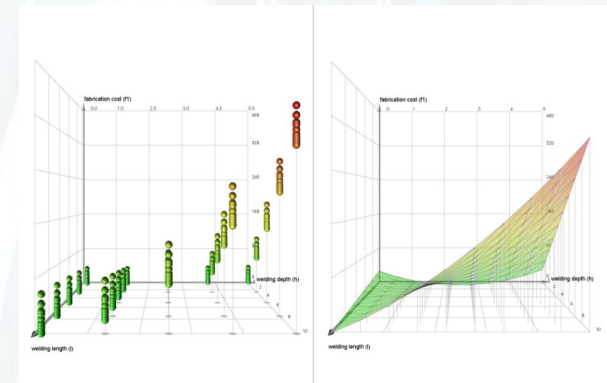


FIGURE 5
Adsorption capacity, q_e , as a function of pH and dose at constant initial concentration (a) and initial concentration and dose at constant pH (b)

Organized by :

Laboratory of Biopolymer and Derivatives (BADs)
Institute of Tropical Forestry and Forest Products
Universiti Putra Malaysia

RESPONSE SURFACE METHODOLOGY IN BIOPROCESS

INTRODUCTION

For an optimal process design and operation of fermentation process, it is essential to select the best microbial strain to be used through its genetic modification as well as appropriate physical-chemical environment factor. The methodology of optimization of environmental factors such as medium and cultural conditions has been traditionally based on very extensive costly experimental work and time consuming. This experimental method involved change-one-factor-at-a-time in which a single factor is varied while other factors kept at a specific set of conditions. This method may lead to unreliable results and wrong conclusions, and is inferior to the factorial design method.

In order to overcome the difficulties of this methodology, which is basically a collection of statistical techniques for designing experiments, building models, evaluating the effect factors for desirable responses. Its better deal with multifactor design as well as regression.

RESPONSE SURFACE METHODOLOGY IN BIOPROCESS

The response surface methodology (RSM) is generally a methodology of constructing approximations of the system behavior using results of the response analyses calculated at a series of points in the variable space. This method is applied in various field such as chemistry, physic, engineering as well as biotechnology to find the optimum response.

WHO SHOULD PARTICIPATE

Postgraduate students, scientist, personnel in research and development and those who want to get experience in the application of the Response Surface Methodology in process optimization for fermentation.

OBJECTIVES

The objective of this workshop is to provide both theoretical and practical aspects, especially in computing experience to their ability to use this methodology for process optimization in the field of biotechnology. This workshop is mainly deal with problems associated with application of statistical methods as a tool system optimization in fermentation process.

WORKSHOP SCHEDULE

6 th June 2012 (Wednesday)	
08.30 - 09.00	Registration
09.00 - 10.00	Lecture 1: Introduction to Process Optimization
10.00 - 10.30	Coffee / Tea Break
10.30 - 12.30	Lecture 2: Response Surface Methodology
12.30 - 14.00	Lunch Break
14.00 - 17.00	Lecture 3: Design Expert & Case Study 1
7 th June 2012 (Thursday)	
09.00 - 10.00	Lecture 4: Case Study 2
10.00 - 10.30	Coffee / Tea Break
10.30 - 12.30	Lecture 5: Cont...
12.30 - 14.00	Lunch Break
14.00 - 15.30	Lecture 6: Discussion
16.30 - 17.00	Closing Ceremony & Certificate Presentation