

**OPTIMIZATION OF HYDROLYSIS CONDITIONS FOR THE
PRODUCTION OF ORIENTAL ANGEL WING (*Pholas orientalis*)
HYDROLYSATE BY PROTAMEX: EFFECT OF TIME AND
ENZYME SUBSTRATE RATIO**

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This Final Year Project Report entitled “**Optimization of Hydrolysis Conditions for the Production of Oriental Angel Wing (*Pholas orientalis*) Hydrolysate by Protamex : Effect of time and enzyme substrate ratio**” was submitted by Emilia Azrina bt. Mohd Bakri, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Food Science and Technology, in the Faculty of Applied Sciences, and was approved by



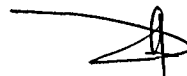
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ABSTRACT

THE OPTIMIZATION OF THE HYDROLYSIS CONDITIONS FOR THE PRODUCTION OF ORIENTAL ANGEL WING (*Pholas orientalis*) HYDROLYSATE BY USING PROTAMEX : EFFECT OF TIME AND ENZYME SUBSTRATE RATIO

In this study, oriental angel wing (*Pholas orientalis*) hydrolysate was hydrolyzed by using Protamex. The total protein content in oriental angel wing per 100g sample was 12%. Hydrolysis conditions were optimized by using response surface methodology (RSM). The model equations were proposed with regard to the effects of time (min) and enzyme substrate ratio (%) on the degree of hydrolysis (DH) and nitrogen recovery (NR). By fitting the experimental data to the equation, the DH optimum levels for time (180min), ES (6%), %DH (5.11%) with desirability 0.596 at constant pH 7 and constant temperature 50°C were obtained. For %NR, the optimum levels for time (92.44 min), ES (3.21%), %NR (0.972%) with the desirability 0.935 were obtained. This study is important to any researcher to make a further analysis regarding the activity of enzyme hydrolysis especially when dealing with endoproteinase enzyme such as Protamex. This study also had open the opportunity for those who want to do further study on the sample namely oriental angel wing (*Pholas orientalis*) which is not yet popular among scientist. It also help to increase the economical support for those who supplied these bivalvè species.