OPTIMIZATION OF THE HYDROLYSIS CONDITION FOR THE PRODUCTION OF IKAN BOLOS (*Sillago argentifasciata*) HYDROLYSATE BY USING ALCALASE : EFFECT ON TEMPERATURE AND HYDROLYSIS TIME

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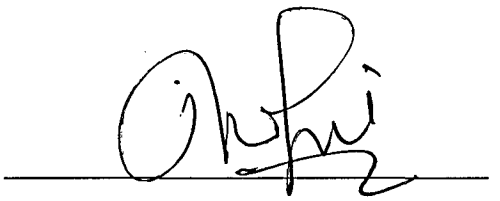
Final Year Project Report Submitted in
Partial fulfillment of the Requirement for the
Degreè of Bachelor of Science (Hons.) Food Science and Technology
In the Faculty of Applied Sciences
Universiti Technology MARA

NOVEMBER 2009

This final Year Project Report entitle **"Optimization of the hydrolysis condition for the production of ikan bolos (*Sillago argentifasciata*) hydrolysate by using alcalase : effect of temperature and hydrolysis time"** was submitted by Noorul Fhadila Kamarudin, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Science and Food Technology, in the faculty of Applied Sciences, and was approved by



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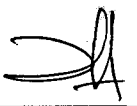

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ACKNOWLEDGEMENTS

In the name of ALLAH, the Most Gracious and The Most Merciful. Peace and blessing of Allah Al Mighty to our beloved Prophet Muhammad SAW and his relatives also his companions and his followers. Alhamdulillah and thankfulness to Allah SWT, and with His willingness allowed me to complete this final year project entitle "Optimization of the hydrolysis condition for the production of ikan bolos (*Sillago argentifasciata*) hydrolysate by using alcalase".

First and foremost, thank you to my supervisor Dr. Normah Ismail for spending her time to guide me, provide information and suggestion also motivate me to complete my research. A big thank to Dr. Zaibunnisa also to Dr.Zainal Samicho for the guidance. My gratitude also to Assistant Science Officer,Pn. Nora and Assistant laboratory, Pn.Siti and laboratory assistant En.Fazli for their helping my research. A big thank to my beloved parents, Kamarudin B. Mat Nor and Hazmah Bt. Mustapha and to all my siblings on their contribution giving me support physically and mentally. Not to forget all my friends especially to Muhammad Firdaus B. Dan, and to everyone who has contributed in this research.

Noorul Fhadila binti Kamarudin

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ABSTRACT

OPTIMIZATION OF THE HYDROLYSIS CONDITION FOR THE PRODUCTION OF IKAN BOLOS (*Sillago argentifasciata*) HYDROLYSATE BY USING ALCALASE : EFFECT ON TEMPERATURE AND HYDROLYSIS TIME

The optimization of the hydrolysis condition for the production of ikan bolos hydrolysate by using Alcalase were studied. Hydrolysis conditions were optimized by using a response surface methodology (RSM). The model equations were proposed with regard to the effects of temperature (T), time (t) on the percentages of nitrogen recovery (NR) and percentages of degree of hydrolysis (DH). By maintaining the pH constant at 6.5 and enzyme substrate ratio at 2%, the optimum conditions as suggested by the RSM are at 60. 26 °C which required 88.91 min of hydrolysis time in which maximum percentage of nitrogen recovery at 2.8 can be recovered with desirability of 1 and maximum percentage of degree of hydrolysis at 3.5 can be obtained at 50°C in 180 min with 0.777 desirability.