

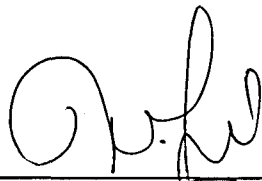
**OPTIMISATION OF ALCALASE HYDROLYSIS CONDITION FOR
PREPARING FISH PROTEIN HYDROLYSATE FROM SILLAGO
BANDED WHITINGS (*Sillago argentifasciata*): EFFECT OF pH AND
ENZYME SUBSTRATE RATIO**

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**Final Year Project Proposal Submitted in
Partial Fulfilment of the Requirement for the
Degree of Bachelor (Hons) of Food Science and Technology
In the Faculty of Applied Sciences
Universiti Teknologi MARA**

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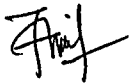
This Final Year Project Proposal entitled “**Optimisation of Alcalase hydrolysis condition for preparing fish protein hydrolysate from Sillago Banded Whittings (*Sillago argentifasciata*): Effect of pH and enzyme substrate ratio**” was submitted by Nurul Asyikin Binti Mohd Sukeri, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons) Food Science and Technology, in the Faculty of Applied Science, and was approved by



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ABSTRACT

OPTIMISATION OF ALCALASE HYDROLYSIS CONDITION FOR PREPARING FISH PROTEIN HYDROLYSATE FROM SILLAGO BANDED WHITINGS (*Sillago argentifasciata*): EFFECT OF pH AND ENZYME SUBSTRATE RATIO

Fish protein hydrolysate was prepared from Sillago Banded Whittings fish (*Sillago argentifasciata*). Hydrolysis condition such as pH and enzyme substrate ratio was used for preparing fish protein hydrolysate which were optimised by response surface methodology (RSM) using a factorial design. Model equation was proposed with regard to the effect of pH and enzyme substrate ratio. The optimum percentage of nitrogen recovery (%NR) achieved was about 13.35% with optimum pH of 6.79 and optimum enzyme substrate ratio of 2.77% using alcalase. An enzyme substrate ratio of 0.33% and pH of 9.00 were found to be the optimum conditions to obtain a high degree of hydrolysis close to 0.59% using alcalase. The hydrolysate prepared from Sillago banded whiting fish has potential for applications in aquaculture or animal feeds and also has a potential to be an effective nitrogenous source in microbiological growth media. Sillago banded whiting fish hydrolysate also has potential to be commercialise as a flavour enhancer.