PRODUCTION OF GREEN MUSSEL HYDROLYSATE(*Perna viridis*) FOR UMAMI FLAVOR DEVELOPMENT

NURDALILA DIYANA BT MOHD RODZI

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This Final Year Project Report entitled **"Production of green mussel hydrolysate (*Perna viridis*) for umami flavour development"** was submitted by Nurdalila Diyana Binti Mohd Rodzi 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

Dr Normah Bt Ismail
Supervisor
B. Sc. (Hons) Food Science and Technology
Faculty of Applied Sciences
Universiti Teknologi MARA
40450 Shah Alam
Selangor

Assoc. Prof. Dr. Noorlaila Ahmad
Project Coordinator
B.Sc.(Hons) Food Science and Technology
Faculty of Applied Sciences
Universiti Teknologi MARA
40450 Shah Alam
Selangor

Dr. Aida Firdaus Muhammad Nurul Azmi
Programme Coordinator
B.Sc.(Hons) Food Science and Technology
Faculty of Applied Sciences
Universiti Teknologi MARA
40450 Shah Alam
Selangor

Date: 14/01/2015

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ABSTRACT

PRODUCTION OF GREEN MUSSEL HYDROLYSATE (*Perna viridis*) FOR UMAMI FLAVOUR DEVELOPMENT

This study was conducted to evaluate the umami taste in protein hydrolysate produced from green mussel (*Perna viridis*) by using flavourzyme at pH 8 with E/S 3 % in the presence of 1.5% STPP and 0.4% NaCI.Amino acid compositions, molecular weight distribution and sensory of the resulting hydrolysates were determined. The degree of hydrolysis and yield were also determined. Results showed that hydrolysis using flavourzyme produced 23.18% degree of hydrolysis (DH) when STPP and NaCI were added where the DH was the highest compared to other hydrolysates. Green mussel produced with the addition of flavourzyme, STPP and NaCI showed darkest colour and produced highest yield (8.34%). Amino acid which contributes to the umami taste such as glutamic acid, glycine and aspartic acid was higher in green mussel hydrolysate with the addition of STPP and NaCI. According to SDS-PAGE analysis, the hydrolysates protein bands appeared between 90 to 10 kDa where hydrolysate with addition of STPP and NaCI had bands with lower intensities. Green mussel with the addition of STPP and NaCI showed the highest score for all the five basic tastes (umaminess, bitterness, saltiness, sourness and sweetness) with slight fishy odour compared to others. However, the score for bitterness was still lower than the reference solutions. Therefore, as a conclusion green mussel hydrolysate produced in this study has a high potential as food flavourant.