

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

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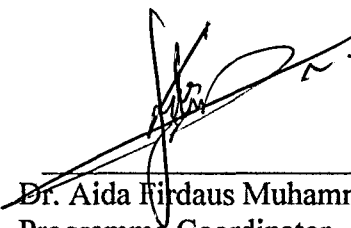


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ABSTRACT

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% NaCl. 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 NaCl were added where the DH was the highest compared to other hydrolysates. Green mussel produced with the addition of flavourzyme, STPP and NaCl 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 NaCl. According to SDS-PAGE analysis, the hydrolysates protein bands appeared between 90 to 10 kDa where hydrolysate with addition of STPP and NaCl had bands with lower intensities. Green mussel with the addition of STPP and NaCl showed the highest score for all the five basic tastes (umami, 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.