

**OPTIMIZATION OF KRILL (*Euphausia pacifica*) HYDROLYSATE BY
ALCALASE (EFFECT OF TIME AND ENZYME SUBSTRATE RATIO)**

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ABSTRACT

OPTMIZATION OF KRILL (*Euphausia pacifica*), HYDROLYSATE BY ALCALASE (EFFECT OF TIME AND ENZYMES SUBSTRATE RATIO)

In this study, krill protein hydrolysate was produced from krill (*Euphausia pacifica*) and its optimization effects on time and enzyme substrate ratio were determined. Krill protein was hydrolyzed by using Alcalase. Response surface methodology (RSM) was used to optimize the hydrolysis parameter. The parameters were time and enzyme substrate ratio with the percent nitrogen recovery (%NR) and degree of hydrolysis (%DH) being the responses. The levels of enzyme used were 1.38%, 2.00%, 3.50%, 5.00% and 5.62% while the time for hydrolysis taken were 31.72, 40.00, 60.00, 80.00 and 88.28 minutes. The optimum level for nitrogen recovery was 2.80% at 2.00% enzyme substrate ratio and 80 minutes of hydrolysis time with desirability of 0.74. For degree of hydrolysis, the optimum value was 4.04% at 4.07% enzyme substrate ratio for 44.03 minutes of hydrolysis time with the desirability 0.55. The pH and temperature were maintained constant throughout the experiment at pH 7.5 and 65°C respectively.