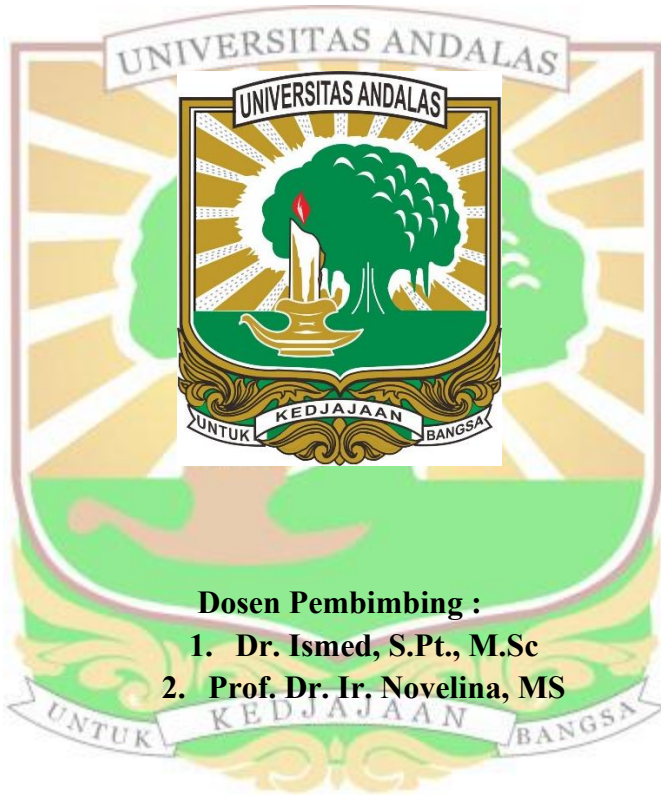


**KARAKTERISTIK HIDROLISAT PROTEIN IKAN  
NILA (*Oreochromis niloticus*) MENGGUNAKAN  
ENZIM FISIN DARI BUAH ARA (*Ficus carica*)**

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# Karakteristik Hidrolisat Cair Protein Ikan Nila (*Oreochromis niloticus*) Menggunakan Enzim Fisin Dari Buah Ara (*Ficus carica*)

Putri Permata Bunda<sup>1</sup>, Ismed<sup>2</sup>, Novelina<sup>3</sup>

## ABSTRAK

Salah satu upaya pemanfaatan protein ikan nila adalah melalui proses hidrolisis protein menggunakan enzim protease. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi *crude* enzim fisin terhadap karakteristik hidrolisat cair protein ikan nila. Penelitian ini menggunakan rancangan acak lengkap (RAL) dengan lima perlakuan konsentrasi *crude* enzim fisin, yaitu 1%, 2%, 3%, 4%, dan 5% (% b/v). Parameter yang dianalisis meliputi rendemen, kadar air, kadar abu, kadar protein, derajat hidrolisis, serta profil asam amino. Data dianalisis menggunakan sidik ragam (ANOVA) pada taraf 5%. Hasil penelitian menunjukkan bahwa konsentrasi *crude* enzim fisin berpengaruh nyata terhadap rendemen, berpengaruh sangat nyata terhadap kadar protein dan derajat hidrolisis, namun tidak berpengaruh nyata terhadap kadar air. Perlakuan konsentrasi enzim 5% menghasilkan rendemen dan derajat hidrolisis tertinggi, sehingga ditetapkan sebagai perlakuan terbaik dalam meningkatkan efektivitas proses hidrolisis protein ikan nila. Oleh karena itu, *crude* enzim fisin dari buah ara berpotensi digunakan sebagai sumber enzim protease dalam produksi hidrolisat protein ikan nila.

**Kata kunci:** fisin; hidrolisat protein; ikan nila

# Characteristics of Liquid Protein Hydrolysate from Nile Tilapia (*Oreochromis niloticus*) Using Ficin Enzyme from Fig Fruit (*Ficus carica*)

Putri Permata Bunda<sup>1</sup>, Ismed<sup>2</sup>, Novelina<sup>3</sup>

## ABSTRACT

One of the efforts to utilize Nile tilapia protein is through protein hydrolysis using protease enzymes. This study aimed to determine the effect of crude ficin enzyme concentration on the characteristics of liquid tilapia protein hydrolysate. The study employed a Completely Randomized Design (CRD) with five treatments of crude ficin enzyme concentrations, namely 1%, 2%, 3%, 4%, and 5% (w/v). The parameters analyzed included yield, moisture content, ash content, protein content, degree of hydrolysis, and amino acid profile. The data were analyzed using analysis of variance (ANOVA) at a 5% significance level. The results showed that crude ficin enzyme concentration had a significant effect on yield, a highly significant effect on protein content and degree of hydrolysis, but no significant effect on moisture content. The enzyme concentration of 5% resulted in the highest yield and degree of hydrolysis and was therefore determined as the best treatment for enhancing the effectiveness of the Nile tilapia protein hydrolysis process. Thus, *crude* ficin enzyme derived from fig fruit has the potential to be used as an alternative protease enzyme source in the production of Nile tilapia protein hydrolysate.

**Key Word:** ficin; protein hydrolysate; tilapia