# A Comparative Study between Tilapia (Oreochromis niloticus) By-product and Tilapia Protein Hydrolysate on Angiotensin I-converting Enzyme (ACE) Inhibition Activities and Functional Properties

## ABSTRACT

Tilapia is a popular freshwater fish and among the important cultured fish grown worldwide. In this study, fish protein hydrolysate was produced from tilapia (Oreochromis niloticus) by-product (TB) and tilapia muscle (TM) through enzymatic hydrolysis using alcalase. The TB and TM protein hydrolysates were evaluated for its characteristics in terms of angiotensin I-converting enzyme (ACE) inhibition activity, peptide size distribution, and functional properties. Hydrolysis for 1 h for TB and TM successfully produced low molecular weight peptides (80% at pH2-9) and good emulsifying, water and oil holding capacities. The study indicated that tilapia protein hydrolysates have the potential to be used as functional food products.