Obtaining hydrolyzed protein from wash water from tilapia surimi production.

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The global growth of aquaculture has been accompanied by an increase in the quantity of by-products generated by the attendant processing. Concern about the sustainability of the fisheries sector, especially the threats posed by solid- and liquid-waste pollution, has highlighted the need to search for methods for the exploitation of these residues. For the production of surimi the input of a large volume of water is followed by a discarded output of a residue fluid rich in nutrients. The present work aimed to perform a protein hydrolysis from the wash water from tilapia surimi production, using the enzyme Alcalase. For kinetics 3 treatments were tested: Alcalase and washing water; Alcalase and washing water filtered and centrifuged and Alcalase and washing water filtered and centrifuged with pH 8.5, at 50 °C for 120min. The results revealed a non-exponential increase in amino-acid production, suggesting a partial hydrolysis. The electrophoresis SDS-PAGE also confirmed these results by showing the breakdown of protein bands and the presence of bands between 14.4 and 30KDa. These results demonstrated the potential of hydrolyzed protein in both food and industrial use.

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