

## Fish side-stream as a potential peptone production: Towards zero waste fish processing

### **ABSTRACT**

Fish processing plants generated significant side-streams composing of heads, skins, trimmings, frames, and guts, which estimated for 70-85% of raw-fish materials during fillet and surimi production. These pose a serious impact to terrestrial and aquatic environments due to the abundance of organic content. Treating side-streams, on the other hand, would impact on financial burden of the fish processing industries. Therefore, an attempt is necessary to convert fish side-streams into value-added products. This is not only to reduce financial burden but also in accordance with the 12th Sustainable Development Goal (SDG) which support zero-waste processing concept. One of the promising products from fish side-streams is peptone. Peptone, a protein hydrolysate characterized as non heat-coagulable and water-soluble product, extensively used in microbiological media. As microbial growth accelerating media, fish peptone could be a precursor for beneficial metabolic products, such as antimicrobial peptides and other bioactive compounds. This review highlights the isolation of peptone from fish processing side-streams specifically the extraction and characterization. In addition, the metabolite productions from lactic acid bacteria with fish peptone-supplemented media are also covered.