**Determination of protein digestibility of Tambaqui fish, Colossoma macropomum at different ages by in vitro methods**

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**ABSTRACT**

Digestibility is part of the sample consumed and not released into the feces. This study discusses about the protein digestibility of Tambaqui Fish (Colossoma macropomum) at different ages and sizes in vitro. Protein digestibility is the ability of the organisms to break down proteins into simple molecular compounds. First all samples that will be used dried first, then add distilled water at pH 8 samples, and then the sample mixture in a vortex for three minutes. After being two kinds of treatment, treatment of enzyme mixture added first and the second treatment is added to the distilled water. The centrifugation and samples will be measured using absorption spectrophotometry. The results obtained during the observations showed that the digestibility of proteins in the casein showed a value of 100%, small pomfret fish for 28.37%, pomfret fish at 58.42%, and large pomfret fish amounting to 88.39%. This shows that the larger size of the fish, then the digestibility of protein will be higher. In addition, the lower the pH, the protein digestibility will be higher due to hydrolysis of proteins require an acidic environment of pH conditions.

**Keywords:** digestibility of proteins, tambaqui, in vitro, hydrolysis,casein.