EFFECT OF SOUS VIDE TECHNIQUE IN TAMBAQUI (Colossoma macropomum) FARMED IN THE AMAZON REGION, BRAZIL


Sous vide technique was applied in tambaqui fillets in order to obtain a product with higher nutritional, microbiological and sensory quality than frozen fillets. The technique consists in promoting a vacuum which can be combined with a controlled cooking processes resulting in a product that can be consumed immediately or can be frozen for later consumption. Different ingredients were added in the form of sauces which were selected through preliminary tests, using a soy sauce and/or a basil sauce base. A complete factorial design $2^2$ was used in order to determine the best process parameters for sous vide process. Tambaqui fillets were vacuum packed, pasteurized at 65°C for 12.5 min. The raw material and final product were evaluated for physical, physical-chemical and microbiological characteristics. In the final product sensory analysis was also made. The results showed that the microbiological analysis was within the limits recommended by Brazilian legislation. The raw fish presents mean pH of 6.07, 14.26 mg N/100g of TVB, water holding capacity of 92.45%, instrumental texture of 20.29 N and 2.63% of fat. The temperature of 65°C for 12.5 minutes was used in sous vide preparation of the present study to result in products with the best texture and water holding capacity. The final product obtained an acceptability of 89% and 97% for the fillets in soy and basil sauce, respectively. We could conclude that the sous vide technique was a successful alternative to make an industrial use of tambaqui from fish farming in Amazon region, Brazil.