

DEVELOPMENT AND QUALITY ASSESSMENT OF A READY-TO-COOK FISH PATTY USING AN UNDERUTILIZED INDIAN MAJOR CARP ROHU (*Lebeo rohita*)

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Fishery products are in high demand around the world due to their nutritious value. Although Rohu is a freshwater fish, rich in nutrients, it is considered as an underutilized fish. This study, sought to produce a Rohu fish patty as a ready-to-cook, value-added fish product. After certain trials followed by a sensory evaluation, the best formulation was selected as 85% minced fish, mixed with 7.5% breadcrumbs, 2.5% wheat flour, 2% salt, 0.5% pepper, 0.5% onion, 0.8% garlic, and 0.05% citric acid, out of four treatments. All ingredients were mixed well, and the fish patty was made into a proper shape. As a preservative 0.5% sodium propionate was used. After shallow frying at 180°C for 8 min., the vacuum-packed product was blast frozen (4 hours at -40°C) to keep under frozen storage (-18°C). the Keeping quality of the product was analyzed over a storage period of 30 days for its physicochemical and sensory properties with shelf-life. Cooking yield ($87.64 \pm 1.59\%$), fat retention capacity ($167.27 \pm 5.33\%$) and shrinkage ($1.68 \pm 0.95\%$) were analyzed to assess the product's cooking qualities. Initial moisture, crude protein, crude fat, ash, crude fiber contents of the developed formulation were $41.92 \pm 0.59\%$, $31.41 \pm 0.16\%$, $9.89 \pm 0.21\%$, $4.27 \pm 0.01\%$, and $1.98 \pm 0.13\%$ respectively. The pH was detected as 6.18 ± 0.00 while the L^* a^* b^* values were 41.13 ± 1.09 , 11.50 ± 0.29 and 15.00 ± 0.61 respectively. The peroxide value was 7.68 ± 0.30 meq O_2 kg^{-1} which is acceptable with the standards. The pH, color, and peroxide values at the end of 30 days of storage had no significant difference ($p > 0.05$) compared to the initial values. A total plate count of 5×10^4 CFU g^{-1} at the end of storage confirms the acceptability of the product. Even, the sensory data was not significant between freshly prepared and stored fish patties. Summing up the study, Rohu fish showcases greater potential to be used in fish patty, and it would be a convenient method of incorporating fish into human diets.

Keywords: Fishery products, Freshwater fish, Peroxide value, Physicochemical properties, Sensory properties