Development of Edible Texturised Dried Fish Granules From Low-Value Fish Croaker (*Otolithus argenteus*) and Its Storage Characteristics

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ABSTRACT

Malnutrition is one of the major problems faced all over the world and particularly prominent in the developing countries. However, large quantities of fish are discarded at sea because it is uneconomic to preserve and bring them ashore. Croaker, a by-catch, is the best example of such fish. The world consumption of fish would be doubled if its unutilized or underutilized resources could be brought into human food chain.

To find the utilization of the presently wasted by-catch, an attempt has been made in this study to prepare texturised dried fish granules, using minced fish meat and low-cost technology. The final product was obtained by using the salt concentration of 12g/100g of minced meat, boiling time of 10 min and mixing time of 6 min at 100 rpm.

Final developed texturised dried fish granules had moisture content 6.45±0.45%, crude protein 60.32±0.54%, crude lipid 1.56±0.52%, crude fiber 0.253±0.57% and ash 30.686±1.21% on dry basis. These dried fish granules were stored in 200-gauge polythene bags. During the four-month storage period, moisture content did not change much. The TVB-N values increased slowly but steadily, reaching a value of 39.2 mg% after four months. No bad odor was developed during the period of storage. Peroxide value and free fatty acid value also increased slowly with storage period. The low crude lipid content of dried granule i.e., 1.56%, the peroxide value of 6.8 milliequivalent/ 1000g of oil and free fatty acid value of 11.5% as oleic acid did not impart any off odor to the product after four months of storage. The total bacterial count increased very slowly with storage period. There was no discoloration of the product during four months of storage. Chemical analysis and sensory evaluation showed that the product was in prime acceptable form for four months of storage at ambient temperature.

The developed texturised fish granules from boiled fish minced meat imparted good odor and texture to the fish granules. Boiling reduces the bacterial count considerably and denatures the proteins. Use of 12g salt/100g of minced fish meat further denatures the protein, resulting in release of some moisture. Drying