

Preparation and evaluation of edible fish powder prepared from small sized croaker *Otolithes ruber* landed at southern coast of Gujarat

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SUMMARY : To find the utilization of the presently wasted by-catch, an attempt has been made in this study to prepare edible fish powder, using small sized croaker and low-cost technology. Small sized of croaker was converted to nutritionally rich edible fish powder by thermal processing technique. These edible fish powder were stored in 200-gauge LDPE bags for six months. Freshly prepared edible fish powder had moisture content 8.10 ± 0.14 per cent, crude protein 57.83 ± 0.28 per cent, crude lipid 4.63 ± 0.23 per cent and ash 7.01 ± 0.24 per cent on dry wt. basis. Monthly analysis indicates that edible fish powder was also rich in protein (57-51%) and mineral like calcium (1319-1214 mg%). During the six-month storage period, TVB-N and PV values increased slowly but steadily, reaching values of 28.66 mg per cent and 22.71 milliequivalent/1000g of fat, respectively. No bad odour was developed during the storage period. There was no discoloration of the product during six months of storage. Chemical analysis and sensory evaluation showed that the product was in prime acceptable form for six months of storage at ambient temperature. The edible fish powder finds use as a fortifying agent to improve the food value and taste of different food items like fish gathiya, fish papad, fish chakri and can also be incorporated in veg. curry to enhance its nutritional value.

Key Words : Edible fish powder, Small size croaker, Thermal processing

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World fish production has peaked more than 128.8 million tons but only just over 60 per cent are used for human consumption and almost 40 per cent are not used for this purpose. The fish that are not utilized for human consumption include 30 million tons of small pelagic

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fish used for production of fishmeal and some 20 million tons of discarded as by-catch (Chandrapal, 2005). Low value fishes account for more than 40 per cent of the total catch from marine fish landings of our country. In India, exports constitute 8 per cent of the trawl catch, distant domestic markets 12 per cent, local consumption as fresh fish 15 per cent, local consumption as salted and dried fish 15 per cent, and fish meal of three grades 50 per cent (Kungsuwan, 1999). Almost 50 per cent or more fish catch in Gujarat does not fetch value and thus is commonly grouped as trash fish. However, much value of unutilized fish is also equally good in protein and other nutritive contents. These small fishes of low value do not fetch high cost and presently they are utilized for drying, fish meal and fish manure only.

Also small varieties of fishes are not relished because of pin bones (source of minerals) and conveniently, converted into meal for animal feed. Considering the growth of the