

A REVIEW

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Value added surimi based seafood from India

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Surimi is a Japanese term for mechanically deboned fish flesh that has been washed with water and mixed with cryoprotectants for good frozen shelf-life. Washing not only removes fat and undesirable matters such as blood, pigments and odoriferous substances but also increases the concentration of myofibrillar protein, the content of which improves the gel strength and elasticity of the product. This property can be made use of in developing a variety of fabricated products like shellfish analogues.

Method of surimi production :

Meat is separated using a meat-bone separator. The diameter of perforations in the drum should not be larger than 3-4 mm to prevent the skin and scales from passing through the holes. The minced fish is washed repeatedly with chilled water (5-10°C) until most of the water soluble protein is removed. Usually 5-10 times water is used and three washing cycle employed. In the final washing, 0.01-0.3 per cent sodium chloride is used to ease the removal of water and pressed using a screw press to a moisture level of 78-80 per cent. Using a silent cutter, cryoprotectants like sugar, sorbitol and polyphosphates

are mixed into the dewatered fish meat at levels 4 per cent, 4 per cent and 0.2 per cent, respectively. During the process the temperature is not allowed to exceed 10°C above which the protein functionality could be damaged. The total protein lost during the washing process is approximately 30 per cent of the minced meat and depends on the amount of water used and number of washing cycles employed. 10 kg surimi block are frozen and stored at - 18°C.

These compact blocks are convenient to handle and can be economical to transport. This frozen surimi becomes the raw material for manufacture of surimi based products. The raw surimi is ground with salt and other food ingredients, then extruded composite molded depending upon the final products and finally heated to set the shape, develop the texture and pasteurize the products. Using this paste various imitated seafood product of different forms, texture, shapes, flavors are prepared such as crab stick, scallop, crab legs, emitted shrimp, lobster tail, surimi cake etc. which have wholesome and nutritious attributes (Park, 2005). Among those attributes a paramount quality factor is texture which, will directly influence on quality (Hu *et al.*, 2007). The