

## Marketing potential

The production and marketing of analogue products offer higher scope for utilisation of low value fishes. At present in India, only a very few firms are focusing on the production of surimi based analogue. However, seafood analogue has a real development potential and can bring foreign exchange to the country. Being the second largest fish producer in the world, a plenty of surimi raw material is available at low coast, which can be converted to this high valued product. European Union is the major buyer for analogue products. South East Asian countries also import a significant quantity of surimi seafood. Popularity of surimi seafood in the domestic market has to be augmented through promotion and awareness programme.

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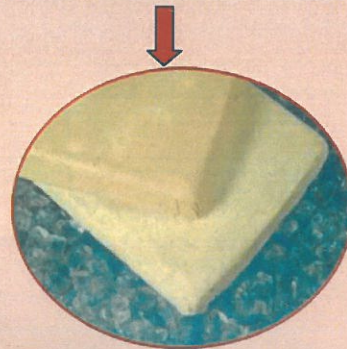
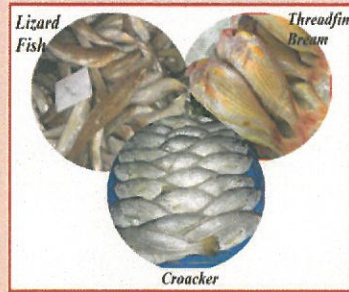


# Seafood Analogues

The modern diet habits along with the fast life style has created an enormous demand for ready to make or ready to eat food products. Several value added seafood products are being developed to meet the demand of working population all over the world. Seafood analogue is a ready to make value added product prepared out of surimi. The technology offers a viable potential for converting the low cost fishes into high valued products. Analogues are also called imitation products as it imitates the color, flavour and appearance of the authentic products. An imitation product with a very specific texture is generated by the gelling of proteins and the gelatinization of starch. Surimi based analogues or surimi seafood is considered as a low cost alternative to shrimp/lobster and has great prospective for earning foreign exchange.

### Raw material and ingredients

Frozen surimi is the starting material for the production of analogue products. Surimi prepared from white fleshed and low fatty species like croaker, threadfin bream, barracuda etc. are most suitable for this purpose. The formulation comprises surimi, water, starch, other proteins, oil, salt, flavorings and colorants. Salt is added to solubilise the surimi proteins and permit it to make elastic and firm gels after cooking. The texture is modified by other ingredients such as cold water and starch. Color and flavour ingredients are added depending on the product to be manufactured. Vegetable oil is occasionally added to improve the mouth feel and texture attributes of the final product.



Surimi

### Type of Products

Surimi based seafood analogs are developed in several styles; but particularly as crab meat. Crab meat is made as filaments and shaped as crab stick, crab bite or crab flakes. Crab stick is currently the most prevalent surimi based fabricated sea food products in the world and is manufactured in large quantity. For imitation shrimp, lobster and scallops, the product is made using moulds.

The process starts with an intermittent mixing step of comminuted surimi and other ingredients combined with grinding. A vacuum mixer is generally employed for chopping and mixing. Shrimp essence, crab essence, lobster essence are added accordingly for imparting the respective flavour to the final product.

The paste obtained is extruded into flat sheet, moulded into desired shape and set by placing it on a cooking belt for 30-100 seconds at 90°C. The coloring is done by wrapping the product with a color coated film. The product after coloring is packed under vacuum in thermoformed trays and then pasteurized, cooled, frozen and cold stored.

