

Mince-Based Fish Products

Disha Chavan

Assistant Professor, Department of Horticulture, College of Agriculture, Sonai, Ahmednagar (M.S.)

SUMMARY

Minced fish can be used for the preparation of different types of products like sausage, cutlets, patties, balls, pastes, surimi, texturized products etc. The processes for the production of most of these products are available and some of them are very suitable for starting small-scale industries. Mince can be prepared either from gutted fish or whole fish. Mince from gutted fish will be better in colour, appearance and flavour. For best quality minces it is desirable to use only a single species of fish so that mince of different quality and stability do not mix together. The freshness of the raw material influences the quality of the mince. The mince will contain all the components like the enzymes, lipids, pigments etc. in the fish that affect its shelf stability. The mince is frozen and stored.

INTRODUCTION

Fish mince/minced fish is the flesh separated from the fish in a comminuted form free from skin, scales and bones. They are made from the trimmings of fish filleting operations, whether hand and machine filleting, was the original source of making fish mince. Significant value addition will accrue to such fish if converted into fish mince because mince can be used to process a variety of value added products having high commercial potential. Other advantage of the process is that it conceals identity of the original fish from which it is made and consumers may not hesitate to accept mince or mince based products even though the original fish would have been unacceptable as whole fish. Surimi is a Japanese terminology for mechanically deboned fish flesh that has been washed with water and mixed with different types of cryoprotectants like Ethylene glycol, dimethyl sulfoxide (DMSO), glycerol for good frozen shelf life. Washing removes fat and also undesirable matters such as blood, pigments and odoriferous substances and increases the conc. of myofibrillar protein, and this content improves the gel strength and elasticity of that product. This property can be made use of in developing a variety of products.

Method of production

Meat is separated from fish 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 at 5-10°C. up to the level most of the water soluble protein is removed. Usually 5-10 times water is used and three washings employed. In the final washing, 0.01-0.3% sodium chloride is used to ease the removal of water and pressed using a screw press to a level of moisture at 78-80%. Using a silent cutter, cryoprotectants like sugar, sorbitol and polyphosphates are mixed into the dewatered fish meat at levels 4, 4 and 0.2% resp. During this process the temp. is not allowed to greater than 10°C which the protein functionally could be damaged. The total protein lost during the washing process is approximately 30% of the minced meat and depends on the amount of water used and number of washing cycles employed.

Different products made from Mince or Surimi:-



Fish Cutlets



Fish Burger



Fish Fingers



Fish Balls

Fish cutlets

Fish cutlets or you can call them fish cakes or fish patties. Fish cutlets are prepared using cooked fish mince, which is mixed with cooked potato, fried onion and species etc. It is then formed into the desired shape, each weighing about 40 g. The formed cutlets are battered, breaded and flash fried for 20 seconds approximately. Deep fried to golden perfection.

Fish Burger

Fish burger is made using mince from lean white fleshed fish. Cooked mince is mixed with cooked potato and some spices and formed into round flat pieces. These are battered, breaded and flash-fried as for fish fingers.

Fish finger

Fish finger is a very delicious product made out of fish mince. The mince is mixed with 1.0% salt, made into rectangular fingers suitable uniform sizes & frozen them. These pieces are given a coating of batter followed by breading. The battered and breaded fish fingers are then fried in oil maintained at 180-200° C for approximately 20 seconds. After cooling the fingers are frozen and stored.

Fish Balls

Fish balls are prepared using minced fish mixed with corn starch, salt and different types of spices and then make balls from them, 2-3 cm in diameter and cooked in boiling brine for 8-10 min. The balls can be processed as a coated product by pre-dusting, battering and breading and fried them on an appropriate heat.

CONCLUSION

The processes for the production of most of these products are available and some of them are very much suitable for starting small-scale business industries.

REFERENCES

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