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ARTICLE REVIEW "PROCESSING OF COB FISH SHREDS"

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ABSTRACT

Fish shreds are processed in the form of smooth and dry fish meat fiber. This review article aims to get information about the manufacture of cob fish shreds and fish shredded quality standards. Based on the results of the literature study obtained information that the manufacture of cob shreds basically consists of irrigation, mixing with seasoning, frying, pressing and packaging. The quality of fish shreds according to the Indonesian National Standard must have a maximum water content of 15% and a protein content of at least 30%. Keywords: quality, moisture content, protein content, purification, seasoning.

INTRODUCTION

As a maritime country, Indonesia has a very wide fisheries sector. In very large quantities, fishery commodities become very promising commodities in Indonesia. In addition to its delicious taste, fish also stores a myriad of nutrients and benefits that are good for the growth and health of the body. This makes fish much loved by all communities from various groups of society.

In addition, fish is a perishable food. Decay is caused by enzymes, both from the fish itself, and from microorganisms outside the body. The high water content in fish accelerates the reproductive process of rotting microorganisms contained in it. The

short shelf life of fresh fish is an obstacle to expand sales of aquatic products. Therefore, the community continues to innovate with various post-harvest processing of fish to minimize these barriers. There are various kinds of fish processing to increase its shelf life, one of which is fish shreds. This review article aims to get information about the manufacture of cob fish shreds and fish shredded quality standards.

Classification of Cob Fish

Cob fish is a fast swimmer fish, its life is clustered and classified as a carnivorous fish that usually eat shrimp, anchovies, and squid. Having morphological features of elongated body shape, medium body size, has two large dorsal fins, the distance of the first and second fins is about 6-9 cm and between the distance of the second fin to the tail there are additional small fins totaling 8-10. The body of the back and sides of the body are dark in color, the abdomen is silvery white. Cob fish has a nutritional content including 69.40% water; fat 1.50%; protein 25.00%; ash 2.25%; and carbohydrates 0.03% (Sanger, 2010).

The classification of cob fish can be classified as follows (Saanin 1984):
Phylum : Animalia
Sub Phylum : Chordata
Class: Pisces
SubClass: Teleostei
Order : Peerchomorphi
Sub Order: Scombrina
Family : Scombridae
Genus: Euthynnus
Species : *Euthynnus affinis*

Figure 1. Cob Fish (Dami 2014)

Habitat is the place where an organism lives and breeds to carry out its life. Cob fish live in the surface layer to a depth of 40 meters with an optimum range between 20-28 °C and enjoy hot waters. Oceanographic conditions affect the distribution of cob fish, namely the availability of food, dissolved oxygen, current speed, salt levels dissolved in water, and temperature. Cob fish are spread regularly in the waters of the Indian Ocean in the tropics and sub-tropics (Adji, 2008).

Shredded Cob Fish

Gambar 2. Shredded Cob Fish (Source: topwisata.info)

Shredded fish is processed in the form of smooth and dry fish meat fiber where the manufacturing process is a combination of boiling and frying by adding spices. In principle, shredded is a preservation process that is a combination of boiling and frying by adding spices. The resulting product has a distinctive texture, aroma and taste. In

addition, the process of making shreds is a process of reducing the moisture content in meat ingredients to extend the storage process (Sulthoniyah et al. 2013).

Importance of Processing Of Cob Fish Shredded Products

Most of the potential of fishery resources in Indonesia has a high economic value, so if managed and utilized properly, the potential of fish stocks can produce significant profits. Cob fish is one type of fish that is economically important in Indonesia because it has a role in improving people's food nutrition and increasing people's income, one of which is the processing of cob fish shredded products.

The selection of fish processed into shreds is another alternative for consumers who do not like to consume meat. In addition, fish contains high-nutritious protein, so it can also be used as a source of protein. Fish shreds are very well made from thick-fleshed fish and low fat content because it will affect the quality and shelf life of the final product produced. Compared with other traditional processed products, minced fish has a relatively long shelf life, which is acceptable even if kept at room temperature for 50 days. According to Cholik (1992), the final product specifications of ground meat are generally water content (17.2%), fat (18.9%), protein (18.9%), salt (2.0%), yield (15 0.0% squid: 30). Kg), shelf life (kept at room temperature for 50 days).

Availability of Cob Fish Shreds in Indonesia

This type of cob fish is described as caught in large numbers in some areas of Indonesian waters such as in the Western Part of Sumatra Island, the Indian Ocean and in the Waters of the South China Sea. At certain times of the year, they are arrested in large numbers in this region. The total production of tuna in Indonesian waters is 1165.36 tons (DKP, 2002). However, this large catch does not necessarily increase fishermen's income, because the market tends to lower prices due to the market's inability to absorb cob fish for fresh consumption. If the cob fish is not received quickly, the quality of the cob will decrease and will cause rotting. To overcome the

above problems, it is necessary to diversify product processing into various types of processed products. One of them is the processing of cob fish shreds.

For now, the production of cob fish shreds has spread in various regions of Indonesia. Many entrepreneurs have successfully produced this cob fish shredded. However, there are still many who do not know that cob fish can be used as shreds. This cob fish shred processing technology needs to be researched to be disseminated through counseling and expanding information in the media to the public considering that this cob fish shredded is technologically very simple processing technology and this fish shredded includes food that is favored by the tongue of the Indonesian people.

Cob Fish Shredded Production Trend

Fish is one of the food sources that are needed and consumed by humans, because it has a high protein content. Proteins have a function as a building agent, regulator, replacement for body parts or tissues that have been damaged. In addition, protein can also be a source of energy and contains essential amino acids needed by the human body. Fish do not have much binding tissue, so fish can easily be digested by the human body (Novia & Soedarmadji, 2019).

Shredded is a dry product, where frying is one of the stages that are generally done in its processing. Processing of shreds, both shredded meat and shredded fish, is done by frying meat and seasoning using a lot of oil (deep frying). Deep frying is a frying process in which the fried ingredients are submerged all in oil. In the deep frying system frying process, the temperature used is 170-200*C with a frying length of 5 minutes, the ratio of fried ingredients with oil is 1: 2. This way shredded contains a lot of oil or fat that has lately been widely avoided for health reasons. Pan frying is the process of frying ingredients using a little oil with a surface temperature can reach more than 100*C (Dewi, et al. 2011).

The innovation of cob fish shredded products is a trend that is being widely produced and consumed by the people of Indonesia considering the condition of products that are quite durable with high nutritional content. Various recipes for

making to case studies of tuna shredded management techniques have been circulating on the Internet. Similarly, many e-commerce and social media began to display cob fish shredded products on storefronts with various positive reviews about taste, content, texture, and much more. This shows that shredded cob fish is a product that is starting to be favored by the people of Indonesia and has a fairly high business potential.

Cob Fish Shred Processing Stages

A. Ingredients

- Those used in the processing of cob fish shreds with various flavors are:
- Cob Fish
- Spices for the manufacture of cob fish shreds such as standard cob fish shredded seasoning (shallots, garlic, coriander, bay leaves and lemongrass stems, tamarind, sugar),
- Rendang-flavored cob fish shredded seasoning (shallots, garlic, ginger, galangal, salt, purut orange leaves, lemongrass, turmeric leaves, pecans, candid acid, bay leaves, red pepper, coriander),
- Curry-flavored cob fish shredded seasoning (shallots, garlic, red pepper, ginger, salt, galangal, sugar, curry powder, lime leaves, lemongrass, cumin).

B. Equipment used:

- Cauldron
- Stove
- Knife
- Cutting board
- Analytical scales
- Oven

C. How to Process:

1. Weeding Fish Fish weeds. Offal and head are thrown away. After that the fish is cut into pieces and washed thoroughly.

2. Preparation of fish suiran. Pieces of fish that have been thoroughly washed are boiled /steamed for 1 hour. After cooling, the fish bones are discarded. Then it is suired and pounded slowly so that it is in the form of fine fibers.
3. Preparation of seasoning and coconut milk. Galangal and lemongrass were beaten to bruises. Onions (100 grams), garlic and coriander are finely ground, then sautéed. Once slightly fragrant, added thick coconut milk, galangal, tamarind, sugar, bay leaves and lemongrass. Heating is continued until boiling and the volume of coconut milk remains half.
4. Shredded cooking

Suiran is put little by little into coconut milk and boiling seasoning. Meanwhile, the fire was reduced just to keep the coconut milk boiling. Heating accompanied by stirring is carried out until the fish suiran becomes half dry. Then, the moist fish shreds are lifted, then fried in hot oil (temperature 1700 C) until crisp (when kneaded brandy).

5. The slice of freshly lifted hot shreds from the oil must be immediately twisted and then pressed with a press. Then the shreds are separated so as not to clump.
6. Mixing with Abon fried onions that have been twisted and pressed mixed with fried onions. The results obtained are called fish shreds.
7. Packaging Of fish shreds packed in tightly sealed packaging.
8. Shreds are ready to be consumed and traded.

According to Fachruddin (1997), shredded quality and durable, in addition to being influenced by the factors of the materials used are also influenced by the way they are made. At the steaming stage, the high temperature is enough until it reaches the boiling point only. Temperatures that are too high will reduce the quality of the appearance and texture of the material. After steaming and slicing, the material is placed on a container wide enough so that the materials do not overlap so that the cooling process is evenly distributed.

Quality Requirements According to SNI

Shredded manufacturers are advised to make shredded products in accordance with Indonesian Industry Standards (SII). Here is a table of SII on shredded products:

Table 1. Indonesian Industrial Standard (SII) fish shredded products.

Component	Value
Fat (Maximum)	30%
Sugar (Maximum)	30%
Protein	20%
Water (Maximum)	10%
Ash (Maximum)	9%
Aroma, Color and Taste	Khas
Hazardous Metals (Cu, Pb, Mg, Zn and As)	Negative
Number of Bacteria (Maximum)	3000/g
Koli Form Bacteria	Negative
Mushroom	Negative

Source : Standar Industri Indonesia

In addition, the quality requirements and food feasibility in fish shreds according to SNI (2013) are as follows:

Table 2. Indonesian National Standard (SNI) quality and feasibility of fish shreds.

Test Type	Unit	Requirements

a. Sensory	Numbers (1-9)	Min 7
b. Mikrobial Spruce - ALT - Escherichia coli - Salmonella - Staphylococcus aureus	 Colony/g APM/g Per 25 g Colony/g	 Max 5,0x10^4 < 3 Negative Max 1,0x10^4
c. Metal Sprue - Kadmim (Cd) - Timbal (Pb) - Merkun (Hg) - Arsen (As) - Timah (Sn)	 mg/kg mg/kg mg/kg mg/kg mg/kg	 Max 0,1 Max 0,3 Max 0,5 Max 1,0 Max 40,0
d. Chemistry - Water Content - Protein Levels	 **%** **%**	 Max 15 Min 30
NOTE* when it is contested		

Source : SNI. 2013. Tentang Abon Ikan 7690.1:2013. Badan Nasional Indonesia

How to Get SNI Cob Fish Shredded Products

Fish shreds are processed products made from fish meat, or processed fish that are seasoned (Huthaimah, 2017). Making shreds can be used as an alternative to tuna processing. According to Suryani et al (2007) shredded fish is a type of processed fish food that is seasoned, processed by boiling and frying. The resulting product has a soft shape, good taste, distinctive smell, and has a relatively long shelf life.

Processing of cob fish shreds has the dual advantage of combining a fishery product while extending the shelf life of its main processed products for foodstuffs that have a relatively short shelf life. Expiration information is one of the prerequisites for producing foods that are safe to contain cob fish shreds, so it is very important to know the information on the estimated shelf life of fish shredded products. According to the Institute of Food Technology (IFT, 1974), the shelf life of a food is the period from

manufacture to consumption when the product is satisfactory in terms of appearance, taste, aroma, texture and nutritional value.

How to Produce Good Processed Food (CPPOB) is a guideline to ensure good production activities in terms of quality and safety. The application of CPPOB should be carried out on all processing, from small to large industries. The government regulates the way of good food production in the Regulation of the Minister of Industry Number 75 of 2010 concerning Guidelines for How to Produce Good Processed Food (Goof Manufacturing Practice). This regulation is intended as a general reference for the food processing industry, food processing industry regulators, and food quality or safety regulators. Fisheries distributed in the community must meet the standards applicable in Indonesia. The standard is given in the form of the Indonesian National Standard (SNI), in the form of product quality and safety requirements regulated by the National Standards Agency. This standard becomes.

Conclusion

Based on the results of the literature study obtained information that the manufacture of cob shreds basically consists of irrigation, mixing with seasoning, frying, pressing and packaging. The quality of fish shreds according to the Indonesian National Standard must have a maximum water content of 15% and a protein content of at least 30%.

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