



ARTICLE REVIEW “ PRODUCT SMOKED CUTTLEFISH”

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ABSTRACT

Cuttlefish are marine animals that are perishable and their availability is seasonal. Therefore, it is very important to do the processing. This article aims to review smoked cuttlefish products. Based on the literature study obtained information that efforts to diversify processing of cuttlefish can be done by smoking. The smoking methods that can be done against cuttlefish are heat fumigation and liquid smoking. Liquid accosts are more recommended because smoke cuttlefish can be obtained that are more hiegines and safe. The stages of the liquid fumigation process consist of the preparation or weeding of cuttlefish, deepening the cuttlefish in a saline solution, soaking the cuttlefish in a liquid smoke solution and finally drying.

Keywords : liquid smoke, drying, salting, diversification, processing.

INTRODUCTION

Cuttlefish belong to the marine animals of the mollusca class. Other molluca groups are squid and octopus. Sotong is very popular by the people of Indonesia untuk consumed because cuttlefish has a fairly high nutritional content and soft meat texture. Consumption of cuttlefish is rarely in fresh form. According to the results of Sulastri research (2011), the nutritional content of the head and body of cuttlefish is a moisture content of 83.65%, protein 13-14%, kadar abu 0.7-0.9%, fat 0.8% and carbohydrates 1.1-1.4%.

Cuttlefish like other Mollusca golongan are perishable and their availability is seasonal. To overcome this, generally cuttlefish are processed directly after being caught. Common cuttlefish processing is dried salted cuttlefish and cassava cuttlefish. Cassavas otong is a special food based on fresh cuttlefish, processed by drying in the sun to dry, then baked and beaten (supported) before serving (Hulalata et al., 2013).

Cuttlefish processing is still limited, so it is necessary to diversify processing. Efforts are made to diversify the processing of cuttlefish, one of which is processed in the form of smoke cuttlefish, namely by smoking methods.

Smoking is one way of processing or preservation that utilizes salting, drying and smoking itself. The purpose of smoking in general is to produce products with a long shelf life, products that are processed by smoking have a distinctive appearance and taste. This article aims to review smoked cuttlefish products

Squid

Cuttlefish is a marine animal that has arms on the head so it belongs to the class Cephalopods. Cuttlefish are included in the 6 main commodities of fisheries. In 2017 cuttlefish ranked first which has the most consistent export volume value among the five other major fisheries commodities.

The taxonomic classification of cuttlefish is as follows (Jereb and Roper 2005):

Kingdom: Animalia

Phylum: Mollusks

Grade: Cephalopods

Subclass: Coleoidea

Ordo : Sepioidea

Genus : Sepia

Species : *Sepia* sp.



Figure 1. *Sepia* sp.

Cuttlefish have a rather short ovoid-shaped body with flesh fins encircling the entire body and the back of the body is round. The back of the cuttlefish is hard because in the flesh there is a skeleton of chalk that is oblong and white. Around the mouth there are eight short hands and two long hands (tentacles). The short hand is circled with a sucking device along the hand, while the long hand (tentacles) is only at the end. The color of cuttlefish varies but is generally brown or yellow-brown depending on the color of the bottom of the water, on the back there is a twisted line. The size of the length of cuttlefish can reach 30-35 cm, but usually 20-25 cm.

Cuttlefish belong to neuritic animals whose distribution from the surface layer to a certain depth. Life is clustered and attracted to the light of the lamp (positive phototaxis). According to Sin et al. (2009), cuttlefish are commercially an important fishery species in many coastal areas of Asia. Its deployment areas include the East China Sea, South China Sea, Gulf of Thailand, Arafura Sea, Timor Sea and Australian waters, western Pacific waters, Philippines, and Indonesia (Hamzah & Pramuji 1997; Carpenter & Niem 1998). According to Hartati et al. (2004), cuttlefish fishing areas are found in almost all waters in Indonesia, one of which is the Strait of Malacca (Aceh, North Sumatra and Riau) and North Java (Jakarta, Central Java and East Java).

Smoke Squid

Smoke cuttlefish is a cuttlefish that is processed by the smoking method. The fumigation process can be done by smoking and liquid charging. On heat fumigation, the distance between the cuttlefish and the source of smoke is close. The smoke is quite high, so the cuttlefish quickly ripens. High heat can stop

unwanted enzyme activity, clump proteins, and evaporate some of the water in the fish body, so that the longevity of the fish can be increased.



Figure 2. Smoke Squid

The way of heat fumigation commonly used by the community is to burn wood, the result of burning will form smoke compounds that then stick to the water layer on the surface of the fish body so that a distinctive color and aroma are formed. Namun from the way of smoking used the resulting products are not good for health, this is due to the formation of compounds that are toxic polycyclic aromatic hydrocarbons (PAHs). This compound if consumed in large quantities will be toxic to the body.

Smoking using smoking cabinets and furnaces, there is still benzo (α) pyrene content, benzo(a)pyrene, has been identified as a PAH compound that has high carcinogenic properties, because it can form complexes with DNA permanently and cause mutations in genes (Elisabeth et al. 2000; Privately 2013). One type of alternative smoking that is often used is smoking using liquid smoke (liquid smoking)

Another method of smoking to obtain smoke cuttlefish is liquid smoking. Liquid smoking is a fumigation that utilizes liquids from the burning of materials such as wood, rice husks, coconut shells and other materials that are first purified by distillation before being used to soak fish. Liquid smoking has advantages including easy to apply, the process takes place quickly, gives distinctive characteristics to products such as color, aroma and taste and does not pollute the environment, toxic compounds are easy to control (Princess and Diana, 2015).

In the process of liquid smoking, the smell of smoke that will be produced in the smoking process is obtained without going through the smoking process, but through the addition of smoking agent liquid to the product. The raw material of cuttlefish is soaked in wood acid, which is obtained from the results of dried evaporation extracts of wood elements or from the results of extracts added to wood fragrance, which is almost the same as the aroma on smoking, after which the fish is dried and becomes the final product. The method of adding sucking material to cuttlefish, can be carried out through soaking, smearing or spraying.

Smoking the cuttlefish will cause the color of the cuttlefish to turn yellow-brown gold. This color is produced by the chemical reaction of phenols with oxygen from the air. The oxidation process will run quickly when the environment is acidic. The taste will also change in the cuttlefish smoked. Cita the taste and aroma of smoked cuttlefish is very specific, that is, the taste of delicious spiciness. The taste and aroma are produced by acidic compounds, phenols, aldehydes and other substances as a helper to be able to produce the taste.

Smoke Cuttlefish Processing Stage with liquid smoking method

The process of smoking cuttlefish with liquid smoke using the Mekarsari et al. (2016) method has been modified. The cuttlefish is weeded by pulling the cuttlefish head out of the body. The middle of the cuttlefish's body is shaken, then the inner abdomen is removed and washed with running water. The cuttlefish is then soaked in a 5% saline solution for 10 minutes, after which it is twisted for 20 minutes. The function of salting is to help facilitate washing, increase the taste of the product, help preservation, drying and cause the texture of cuttlefish meat to be more compact, followed by immersion in a liquid smoke solution with a concentration of 12% for 25 minutes. The next stage is done drying using the oven at a temperature of 100 °C for 3 hours.

CONCLUSION

Based on the literature study as described above obtained information that efforts to diversify processing of cuttlefish can be done by smoking. The smoking methods that can be done against cuttlefish are heat fumigation and liquid smoking. Liquid accosts are more recommended because smoke cuttlefish can be obtained that are

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