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### Processing and Organoleptic Quality of Salted Fish in Pangandaran Village Pangandaran District

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#### Abstract

This research aims to analyze the salted fish production process and organoleptic quality produced in Pangandaran Village, Pangandaran District, Pangandaran Regency, West Java, Indonesia. This research was conducted from February 20, 2023 to March 20, 2023. The research method used was the survey method. The research procedure was carried out in two stages. The first stage observed the process of making salted fish products and the second stage tested the organoleptic quality of salted fish produced. Analysis of the manufacture of salted fish is done by observation to the production site and interviews with workers and business owners. Organoleptic quality testing is done with a scoring test. The scoring test scoring format is in Table 1. Observation of salted fish making is centered on one of the

Small and Medium Enterprises (SMEs) "MAMAH JAMBAL" which is the largest salted fish producer in Pangandaran Village. The data obtained were analyzed descriptively. The results showed that the salted fish production process carried out in Pangandaran Village, Pangandaran District, Pangandaran Regency starts from weeding fish (removal of scales, entrails and gills), washing, rinsing, salting, soaking washing again, smearing with spices and drying. The organoleptic quality of salted fish produced has an average score value of 9. Overall, it meets the quality and food safety requirements. As stipulated in SNI, the quality and food safety requirements for rebon shrimp for organoleptic value are at least 7.

**Keywords:** Descriptive, Salt, Weeding, Taste, Scoring

#### Introduction

Most of Indonesia consists of coastal areas. Coastal areas are areas inhabited by communities with distinctive family characteristics. According to Sidik (2022) <sup>[13]</sup>, the coastal area is an area full of fishery potential, but basically coastal communities, some of whom earn a living as fishermen, are still synonymous with the problem of poverty, which is still a classic coastal phenomenon. The large potential of fisheries in the Pangandaran tourism area is utilized by the surrounding community as a source of income.

Fish is one of the sources of animal protein that is widely consumed by Indonesians, especially in Pangandaran because it is easily available, cheap and very good for body growth because the amino acids in fish are similar to amino acids found in the human body (Marpaung, 2015) <sup>[8]</sup>.

Fishery products are commodities that are easily subject to quality deterioration and decay processes, so they need fast, precise and correct handling to maintain their quality (Nurimala, *et al.*, 2021) <sup>[10]</sup>. Fishery products in Indonesia, especially in Pangandaran, are utilized in the form and processed. The most used utilization in processed form is drying and salting.

The salted fish produced in Pangandaran is well known in Indonesia. This salted fish is obtained through a traditional salting process. According to Anggraeni *et al* (2019) <sup>[1]</sup>, traditional fish processing generally pays less attention to sanitation and hygiene during the processing process. Sanitation and hygiene is one of the factors that affect the quality of food/food products (Atmoko, 2017) <sup>[4]</sup>, including organoleptic quality. Therefore, this research aims to analyze the production process of salted fish and the organoleptic quality produced in Pangandaran Village, Pangandaran District, Pangandaran Regency, West Java, Indonesia.

**Research Methods**

This research was conducted from February 20, 2023 to March 20, 2023. The research method used is the survey method. The research procedure was carried out in two stages. The first stage observes the process of making salted fish products and the second stage tests the organoleptic quality of the salted fish it produces. Analysis of the manufacture of salted fish is done by observation to the production site and interviews with workers and business owners. Organoleptic quality testing is done with a scoring test. The scoring test scoring format is in Table 1. Observation of salted fish making is centered on one of the Small and Medium Enterprises (SMEs) "MAMAH JAMBAL" which is the largest salted fish producer in Pangandaran Village. The data obtained were analyzed descriptively.

**Table 1:** Organoleptic Test Scoring

Organoleptic Properties	Value
<b>Appearance</b>	
- Whole, clean, neat, luminous according to type.	9
- Whole, clean, less tidy, luminous by type.	8
- Intact, clean and slightly dull.	7
- Whole, less clean, a bit dull.	6
- Slight physical damage, not clean, some parts rusted.	5
- Slight physical damage, color has changed.	4
- Some are ruined, dirty.	3
- Crushed, very dirty, color changed from specific type.	1
<b>Smell</b>	
- Fragrant, type-specific, with no additional odors.	9
- Almost neutral, slight additional odor. -Neutral, slight additional odor.	8
- Additional odor disturbing, not foul, slightly rancid -Rancid, slightly musty, ammoniacal odor.	7
- Rancid, slightly musty, ammoniacal odor.	6
- Unpleasant, slightly foul, loud ammonia	5
- Rotten	4
<b>Texture</b>	
- Dense, compact, pliable, moderately dry	9
- Dense, compact, flexible, less dry.	8
- Too hard, not fragile	7
- Solid, not brittle	6
- Soft, wet, non-biodegradable.	5
- Dry, brittle, easy to decompose.	4
- Soft, brittle, easy to decompose.	3
- Soft, wet, easy to decompose.	2
- Wet, watery, clearly decomposed	1
<b>Mushrooms</b>	
- None/not visible	9
- Present/visible	1

Source: National Standardization Agency, (SNI 01-2346, 2006).

**Results and Discussion**

**Overview of the Salted Fish Business**

Salted fish making business owned by "MAMAH JAMBAL" is one of the Small and Medium Enterprises (SMEs) engaged in the processing of fishery products. This salted fish business is still on the scale of a household industry whose processing is carried out by the "MAMAH JAMBAL" shop itself assisted by 1 employee and several family members "MAMAH JAMBAL". This business was established in 1982. The raw material used in salted fish processing is demersal fish caught by local fishermen. The types of fish used as raw materials for salted fish processing

in Pangandaran Village, South Morotai District, Pangandaran Regency can be seen in Table 2 below.

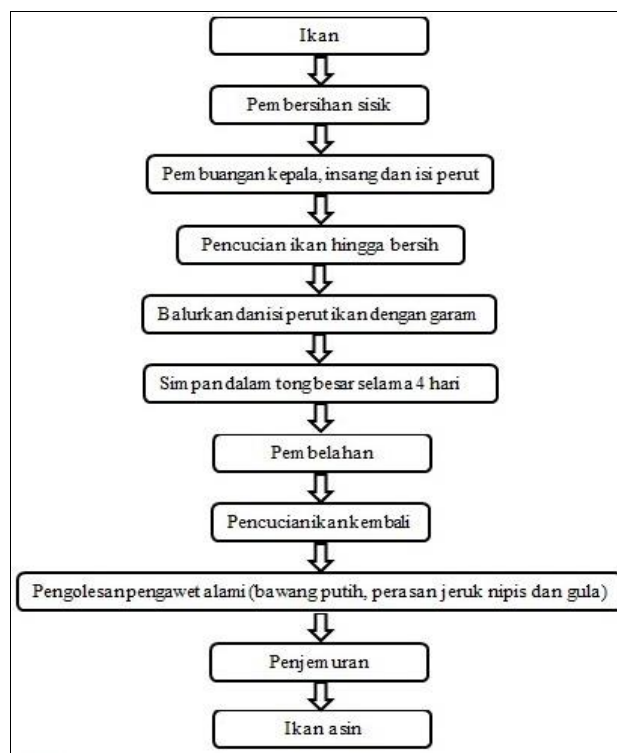
**Table 2:** Types of fish used as salted fish in Pangandaran Village

S. No	Type of Fish		
	Local Name	National Name	Scientific Name
1.	Kadukang Fish	Kedukang Fish	<i>Hexanematchthys sagor</i>
2.	Bilis Fish	Bilih Fish	<i>Mystacoleucus padangensis</i>
3.	Anchovies	Anchovies	<i>Engraulidae</i>
4.	Pepetek Fish	Peperek Fish	<i>Leiognathida</i>

Raw materials are obtained from fishermen from Pangandaran Village. In addition to raw materials in the form of fish, this business also requires several ingredients such as clean water, salt and sometimes ice. The equipment used during the fish processing process are barrels (1 quintal size), knives, and cool boxes. In one production, Toko "MAMAH JAMBAL" usually produces up to more than 200 salted fish once a season. Salted fish processing is done every day and is usually adjusted to the catch of fishermen.

**Processing of Salted Fish**

The fish processing process carried out by the "Mamah Jambal" production house includes cleaning the scales, removing the head, gills and entrails of the fish, washing, soaking the fish with salt, dividing the fish, to the drying process. The complete arrangement of stages in the processing of salted fish produced by "Mamah Jambal" is as follows:



**Fig 1:** Process stage of making salted fish "Mamah Jambal"

The first stage in making salted fish is that the fish caught is initially cleaned from the scales. Fish commonly used in the manufacture of salted fish "Mamah Jambal" is fish that has scales on the skin so that the scales must be cleaned so that the salting process can seep evenly into the body of the fish, but also to facilitate the process of dividing the fish, and the process of drying the fish so that it can dry evenly.

The next stage is the disposal of fish entrails by cutting the head first then pulling from the gills of the fish until the entrails come out. After that, wash using clean water to remove the remnants of dirt, scales, mucus and fish blood that are still attached to the fish meat.

The next stage is the process of salting the fish. Salting aims to make the fish salty during the manufacturing process. The purpose of salting food such as fish is to reduce water content, so that microbes, especially types of bacteria, cannot develop (Muhammad *et al.* 2019)<sup>[9]</sup>. The salt used at this stage is krosok salt. In the process, the cleaned fish is given salt on its stomach until it is full, then put into a barrel with a full load capacity of about 1 quintal. After the barrel is filled with fish, the surface of the barrel is fully salted until it is certain that no flies can enter the barrel and contaminate the fish inside. Next, store and leave for four days. When this is done, the fish in the barrel is taken out to be split and washed again to reduce the amount of salt that sticks to the fish meat. Washing can be done several times to get good fish results (Susianawati, 2006)<sup>[14]</sup>.



**Fig 2:** The process of salting fish in large vats

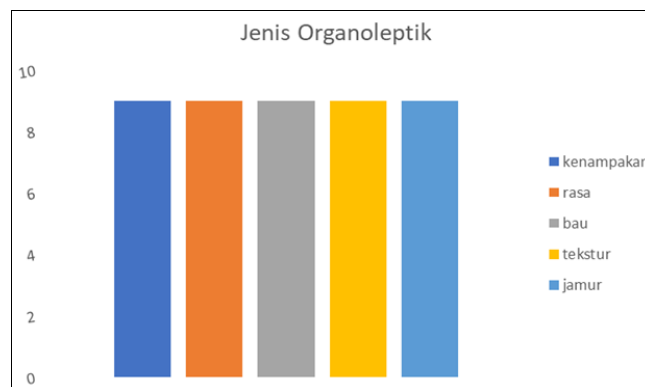
The last stage is the drying process. But before drying, this "Mamah Jambal" salted fish production house will apply natural preservatives first to the fish to be dried. The natural preservative concoction used consists of several ingredients such as garlic, lime juice, and sugar. The natural preservatives used aim to slow down the process of quality deterioration in fish. According to Lauma *et al.* (2015)<sup>[7]</sup>, lime contains flavonoids which are substances that can inhibit bacterial growth. After the process of applying this natural preservative is complete, the fish is dried on a pandagan by utilizing the hot sun for two days.



**Fig 3:** The process of drying under the hot sun

### Organoleptic Test

Organoleptic is a test method using human senses as the main tool to measure the acceptance of food. Sensory testing or testing with the senses, also known as organoleptic testing, has existed since humans began using their senses to assess the quality and safety of food and beverages (Puni *et al.*, 2020). Organoleptic tests conducted in this study include appearance, taste, odor, texture, and mold tests.



**Fig 4:** Organoleptic test results of salted fish in Pangandaran Village

Based on the Figure above, it can be seen that the overall organoleptic value meets the quality and food safety requirements, because the organoleptic value obtained is at least 9. As stipulated in SNI, the quality and food safety requirements for salted fish for organoleptic value are at least 7.

Appearance according to Nurwin, *et al* (2019)<sup>[11]</sup> is the first specification seen, assessed, and favored by consumers in choosing or consuming a product. The results of the fish appearance organoleptic test for salted fish ingredients get a score of 9, namely the fish is still intact, clean, neat, radiant according to type.

Texture according to Talib and Marlina (2015)<sup>[15]</sup> is all related to mechanics, taste, touch, vision which includes an assessment of wetness, dryness, hardness, smoothness, roughness and oiliness. The results of the fish texture test for salted fish ingredients get a value of 9, namely the fish is still solid, compact, and very elastic.

According to Ichya'uddin (2014)<sup>[6]</sup> Odor is a design for smell (nose) which greatly influences people's judgment in a particular product. The smell of salted fish is one of the indicators in organoleptic assessment that is often used in organoleptic analysis. Salted fish has a distinctive smell, salted fish is valued from the aroma of the food being analyzed. the distinctive smell of salted fish is more desirable to the public than salted fish that smells neutral or smells rancid or rotten. The results of the organoleptic test of the smell of salted fish from Pangandaran Village, Pangandaran Regency gave an average rating of 9 (specific fragrant without additional odor).

The results of the organoleptic test of salted fish flavor show that panelists give an average value of 9, while the lowest taste value given by panelists is 0 no taste at all you could say bland, the taste of salted fish affects the quality of a product and people's preference in consuming salted fish.

Damage to salted fish can be caused by mold. The mold parameter on salted fish in the Pangandaran "MAMAH JAMBAL" shop gets a value of 9 in all samples. This is because there is no mold found in all salt fish. Aris *et al.*,

(2021) [3] reported that the absence of mold is because the raw materials are fresh and the product has just been finished and there is no storage time. The fungi (molds) that grow on salted fish are *Aspergillus sp*, *Mucor sp*, *Cladosporium sp* and *Fusarium sp*.

### Conclusions

The salted fish production process carried out in Pangandaran Village, Pangandaran District, Pangandaran Regency starts from weeding fish (removal of scales, entrails and gills), washing, rinsing, salting, soaking washing again, smoothing with spices and drying. The organoleptic quality of salted fish produced has an average score value of 9. Overall, it meets the quality and food safety requirements. As stipulated in SNI, the quality and food safety requirements for rebon shrimp for organoleptic value are at least 7.

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