

## Method Article

### PROCESSING AND ORGANOLEPTIC TEST OF SALTED ANCHOVIES IN THE FIELD AREA OF KATAPANG DOYONG PANGANDARAN

#### ABSTRACT

This research aims to analyze the production process of salted anchovies and the organoleptic quality produced in 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 conducted in two stages. The first stage observed the process of making salted anchovy products and the second stage tested the organoleptic quality of salted anchovy products produced. Analysis of the manufacture of salted anchovies was carried out by observation to the production site and interviews with workers and business owners. Organoleptic quality testing is done with a scoring test. Observation of the manufacture of salted anchovies is centered in Mr. Nono's production house located in Parapat Hamlet RT 5 RW 9 Lapang Katapang Doyong, Pangandaran Village, Pangandaran District, Pangandaran Regency, West Java. The data obtained were analyzed descriptively. The results showed that the process of making salted anchovies in Pangandaran, West Java-Indonesia includes receiving raw materials, salting, washing, drying and sorting. The organoleptic test results of salted anchovies are as follows: the smell has a value of 5 with the characteristics of a fairly sharp and disturbing odor, then a value of 6 for a taste that is considered quite good, the consistency has a value of 6 with the characteristics of solid and not brittle and has a value of 9 for mold or fungus which means there is no additional mold in salted anchovies.

Keywords: Descriptive, Observation, Salting, Taste, Scoring.

#### INTRODUCTION

Indonesia is one of the maritime countries whose territory is mostly ocean (Putri et al., 2018). This has led to the growth of the fishing industry. Fish catches by fishermen have a large amount but usually cannot be transported all to the market due to all limitations. To overcome this, some fishermen and fish traders process and preserve it so that it does not rot quickly. The purpose of processing and preserving is to increase the added value of fish. According to Sa'adah (2022), one of the processing and preservation that is widely practiced in Indonesia is salting. This salting process can reduce the water content in the fish body so that bacterial growth can be inhibited.

Various types of fish can be found in Indonesia, one of which is anchovy (*Stolephorus commersonii*). Anchovy is a fish that has high economic value after kangaroo, mackerel, lemuru, fly and tuna (Junianingsih and Ramli, 2013). Anchovies belong to the phylum chordata, class pisces, order malacopterygii, genus *Stolephorus*. The body shape is elongated round (fusiform) or slightly compressed to the side (compressed), on the side of the body there is a silvery white line extending from the head to the tail. The scales are small and thin and very easily separated, the upper jaw bone extends to the gill slits. Anchovy has a high nutritional content. Anchovy is a source of calcium and protein (Aryati dani Dharmayanti, 2014).

Anchovies as other types of fish are prone to spoilage (Perishable Food). To inhibit the process of spoilage and at the same time increase its added value, anchovies are widely processed into salted anchovies. The process of processing anchovies into salted anchovies is widely practiced in Pangandaran, West Java-Indonesia (Hartini et al., 2021).

Processing anchovies into salted fish is a traditional preservation method that is still widely practiced in various countries, including Indonesia. Although salted anchovies are very popular with most people, it turns out that public knowledge about salted fish that is safe and good for consumption is still lacking. A good salted anchovy has a color similar to fresh fish, does not smell sour or rancid, has no spots, and is not watery or stiff (Daeng et al., 2016).

The process of making salted anchovies in each region is different both in the stages of the process and in the provision of salt concentration. According to Ningrum et al (2019), the concentration of salt used in making salted fish determines the quality of the resulting product. Apart from the freshness of the raw material, the provision of salt also affects the type of microbes that play a role in fermentation, salt is one of the bacteriostatic ingredients for several bacteria including pathogenic bacteria and spoilage bacteria. Therefore, the research aims to analyze the production process of salted anchovies and the organoleptic quality produced in Pangandaran Regency, West Java, Indonesia. The results of this research are expected to be useful for the government or authorities to carry out the development and guidance of the quality of salted anchovy products.

## 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 observed the process of making salted anchovy products and the second stage tested the organoleptic quality of the salted anchovy products produced. Analysis of the manufacture of salted anchovies was carried out 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 anchovy production was centered at Mr. Nono's production house located in Parapat Hamlet RT 5 RW 9 Lapang Katapang Doyong, Pangandaran Village, Pangandaran District, Pangandaran Regency, West Java. The data obtained were analyzed descriptively.

**Table 1.** Scoring of Organoleptic Test

<b>Organoleptic Properties</b>	<b>Value</b>
<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 - 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 Anchovy Business

Mr. Nono's salted anchovy production house, located in Lapang Katapang Doyong, East Coast, Pangandaran, is one of the micro, small and medium enterprises (MSMEs) engaged in processing fishery products. This salted anchovy business is still on the scale of a household industry where the processing is done by Mr. Nono himself and his family.

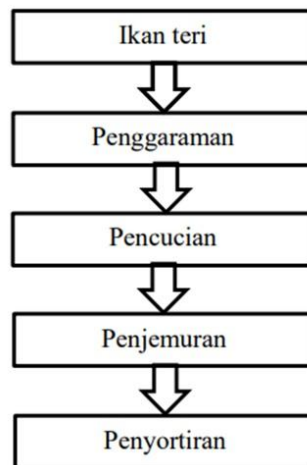


**Figure 1.** Mr. Nono's Production House

The raw materials for making salted anchovies are obtained from the catch of Pangadaran fishermen directly. In one day of production, the anchovies used can reach 100 kg or more depending on weather conditions during the drying process. From 100 kg of wet anchovies to 35 kg of dried anchovies. In addition to being sold in Pangadaran itself, the salted anchovies are also sold to East Java and Central Java provinces.

### **Processing of Salted Anchovies**

The process of processing salted anchovies carried out at Mr. Nono's production house consists of the stages of receiving raw materials (anchovies), salting, washing, drying, and sorting. The sequence of processing can be seen in Figure 2.



**Figure 2.** Processing process of salted anchovies

The raw material for anchovies to be processed into salted anchovies is obtained directly from the catch of local fishermen. If the anchovy raw material comes from fishermen, the anchovy head must be separated and discarded because there is sand that enters the gills from the network or fishermen's catch. While anchovies that come from collecting traders, the head does not need to be discarded because the anchovy is salted. the condition of the anchovies is clean.



**Figure 3.** Anchovy

After that, the salting process is carried out. Salting the anchovies is done directly by sprinkling and mixing the salt powder with the anchovies evenly. The amount of salt used is 25 kg for a quintal of anchovies. This process makes the salt melt so that the anchovy salting process does not add water to dissolve the salt. This salting process is carried out for one day. According to Supriadi *et al.* (2020) salting is done by sprinkling salt crystals on the surface of the fish and then boiling for fifteen minutes. The salt used is pure salt or krosok salt. The ratio between anchovies and salt is 2:1, so for 1000 kg of anchovies, about 500 kg of salt is needed.

After sitting for one day, the anchovies that have gone through the salting process are washed once to minimize the salt content added to the anchovies. The washed anchovies are then dried directly in the sun. Drying can be done for 1 day in hot weather or up to two days when the weather is less favorable. Drying is done in the field directly and can use waring when drying salted anchovies a little. Kartika *et al.* (2022) mentioned that for 8-10 hours depending on the weather when drying. Then during the drying process, 2-3 times the process is reversed so that the salted anchovies dry evenly.



#### Figure 4. Results of Drying Salted Anchovies

After drying the anchovies, they are sorted first before being sold. Sorting is done to sort anchovies with other fish and divide salted anchovies into two sizes, namely small size and large size for marketing. Kartika *et al.* (2022) revealed that sorting is separating anchovies with other fish that are mixed and continued packaging.



Figure 5. Sorting of Salted Anchovies

#### Organoleptic Quality

Human senses can be used as the main tool to measure the acceptability of food is one of the tests that can be done by humans which is often called the organoleptic test. Organoleptic tests or tests with sensory devices have existed since humans began using their senses to assess the quality and safety of food and beverages (Dendi, et al., (2021). In the organoleptic test of salted anchovies produced by "Mr. Nono's production house" includes appearance, odor, taste, consistency, and mold tests.

Characteristics that can be assessed directly by looking at the appearance that is a consideration in choosing or consuming a product. The appearance of this organoleptic test has specifications in the form of the shape of salted anchovies, and the appearance of colors that can be assessed by the sense of sight. In general, the appearance of fresh anchovies is intact, neatly clean, and radiant. In the organoleptic test, this salted anchovy gets a score of 7 which means it has a whole appearance, clean rather dull.

The distinctive smell of salted anchovies is one of the main attractions for consumers. In general, fresh fish has a higher organoleptic value compared to salted anchovies. The salted anchovies observed had an odor organoleptic test value of 5 with the characteristics of additional odor disturbing, not rotten, but slightly rancid.

The addition of salt to the process of making salted anchovies will affect the taste of the salted anchovies. According to Erawati and Putri (2021), salt can stimulate taste and add good flavor. Furthermore, Tuyu et al (2014) explained that one of the attractions of salted fish lies in its distinctive taste. Based on the organoleptic test on salted anchovies, a value of 6 was produced with the characteristics of a mildly pleasant taste, type specifications, a little additional flavor.

Consistency in the organoleptic test is an assessment of the structural conditions in salted anchovies. In salted anchovies, the length of drying and the amount of water content can affect the consistency level, the lower the amount of water content of the salted anchovy product, the better the organoleptic value of the product's consistency. In this consistency test, a value of 6 is obtained with solid and non-brittle characteristics.

Mold or fungi that can attack salted anchovies can be caused because the raw materials used are not fresh and have experienced considerable storage. The mold parameter in this salted anchovy gets a value of 9 which means there is no / does not appear mold on salted anchovies, this indicates that the raw materials used are still fresh and well processed.

## CONCLUSIONS

The process of making salted anchovies in Pangandaran, West Java-Indonesia includes receiving raw materials, salting, washing, drying and sorting. The organoleptic test results of salted anchovies are as follows: The smell has a value of 5 with the characteristics of a fairly sharp and disturbing odor, then a value of 6 for the taste which is considered quite good, the consistency has a value of 6 with the characteristics of solid and not brittle and has a value of 9 for mold or fungus which means there is no additional mold in salted anchovies.

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