



**ARTICLE REVIEW OF SATE BANDENG PRODUCTS, PROCESSED FISH
PRODUCTS TYPICAL OF BANTEN - INDONESIA**

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ABSTRACT

Traditional fish processed products that are used as culinary tours are satay bandeng, typical serang cuisine, Provinsi Banten – Indonesia. This article aims to review the milk bandeng satay products from the ingredients used, the stages of manufacture and their quality. Based on the literature study obtained information that the ingredients used in making milkfish satay are milkfish, salt, white sugar, brown sugar, coriander, onions, red pepper and coconut milk. The stage of making milkfish satay consists of the production of milkfish meat, the production of thorns from fish meat, making seasoning, donating namely mixing seasoning with milkfish meat, filling dough on the skin of milkfish and burning. The quality of milkfish satay is assessed from organoleptic and chemical parameters. The quality of the organoleptic satay of milkfish is brownish yellow, the texture is dense and comfrey on the outside and soft on the inside, the taste is rather sweet and savory with the aroma of coriander and the distinctive smell of grilled food. The chemical quality of milkfish satay is higher than fresh milkfish.

Keywords: quality, stages, nutrition, sugar, organoleptic.

INTRODUCTION

The diversity of processed products typical of the region today has become an icon of culinary tourism. The relationship between processed products or food with tourism destinations has now developed not only as a basic necessity product by tourists, but also has been used as a

differentiator of destinations by creating an impressive atmosphere. This then becomes the identity of the destination. Processed products or foods can also add value to core tourism products and become a focus for special events. In addition, processed products or foods can be used to attract certain niche markets whose numbers are small but usually have high tastes and can spend large amounts of money.

One of the traditional fish processed products that are used as culinary tourism is satay bandeng, a typical serang cuisine, Banten Province – Indonesia. Satay bandeng became an icon of the city of attack. Sate bandeng was introduced by the royal cook Banten Girang in the 16th century to entertain royal guests. This article aims to review the milk bandeng satay products from the ingredients used, the stages of manufacture and their quality.

A. Satay Bandeng

Sate Bandeng is a traditional cuisine typical of Banten, Indonesia. Bandeng satay is made from milkfish (*Chanos chanos*; Indonesian: Bandeng fish) which is removed by thorns, the meat is seasoned and put back into the skin, then pierced or pinched by bamboo stalk punctures, then burned on charcoal coals.



Figure 1. Satay Bandeng (Source: <https://pesonaindonesia.kompas.com/read/2019/04/21/071700227/mencicipi-sate-bandeng-kuliner-khas-banten>)

Banten's typical bandeng satay has several diversity, namely the origin of the artisan area, the process of cooking, taste, packaging, and durability. The origin of the artisan area shows certain characteristics, especially in the taste and cooking process. Satay bandeng has been served in two forms of taste, namely spicy taste and sweetness. The spicy taste gives more of its own sensation. Spicy-flavored satay bandeng is widely produced in the East Serang region. Sweet-flavored satay bandeng is widely produced in west Serang wilaya. Silencing satay is done by a combination way that is steamed and burned or burned only. Satay bandeng is a food that is

less durable if in the open air milk bandeng satay only lasts 1 day while when put in the refrigerator with a normal temperature of 3-6 °C milkfish satay can last up to 7 days.

B. Material-Bahan Yang Di gunakan Pada Pembuatan Sor Bandeng

The ingredients used in the manufacture of milkfish satay can be grouped into main materials and auxiliary materials. The main ingredient in the manufacture of milkfish satay is milkfish. Additional ingredients include onions, salt, brown sugar, white sugar, coriander, red pepper and coconut milk. The description of each material for making milkfish satay is as follows:

1) Milkfish (*Chanos-chanos*)

Milkfish used as raw materials in the manufacture of milkfish satay is a fresh milkfish. The characteristics of fresh milkfish are convex and bright fish eyes, the surface of the skin is not slimy and shiny, the gills are bright red, the mouth is clenched, the scales appear bright and firmly attached when held, the flesh is chewy and elastic; and still smells fresh. Fresh milkfish will drown if put in the water.

Milkfish is widely consumed by the people of Indonesia because of its delicious and savory meat taste. Milkfish is a fishery commodity that is relatively easy to cultivate because it is resistant to extreme environmental changes (Sudrajat et al., 2011 in Septyan Andrianto, 2013).

Milkfish has a nutritional content per-100 grams of fish meat consisting of energy 129 kcal, protein 20 grams, fat 4.8 grams, calcium 20 mg, phosphorus 150 mg, iron 2 mg, vitamin A 150 SI and vitamin B1 0.05 mg. Milkfish meat is very easy to digest and very good for consumption by all ages in meeting the body's protein needs.

Milkfish has good quality fat because milkfish fat contains high omega 3. Omega 3 content in Milkfish (14.2%), Sardines / Mackerel (3.9%), Salmon (2.6%), and Tuna by 0.2%. Milkfish is low in cholesterol. Saturated fat is one of the causes of clogged arterial blood that causes coronary heart disease. By consuming milkfish and processed regularly is one of the great dietary ways to prevent coronary heart disease. Fatty acids in milkfish have hypocholesterolemic characteristics that lower blood cholesterol levels.

2) Shallots (*Allium ascalonicum L*)

Onions are one of the horticultural commodities included in the vegetable spices that are used as a complement to cooking spices to add flavor and enjoyment of cuisine. Onions contain 1.5 g of protein, 0.3 g of fat, 36 mg of calcium, 40 mg of phosphorus of vitamin C 2 g, 39 kcal of calories, and 88 g of water and 90% edible ingredients. The composition of onions includes, essential oils, cycloaliin, methylaliin, dihydroaliin, flavonglikosides, quercetin, saponins, peptides, phyto hormones, vitamins, and starches. The essentials found in onions can cause a special aroma and give a savory taste to food.

3) Salt

Salt in food processing serves to improve taste, act as a forming texture, increase sweetness, reduce the taste of pit and improve food color. Salt is also used to control the growth of microorganisms by stimulating the growth of desired microorganisms and inhibiting the growth of rotting microbes and pathogens. Salt has high osmotic pressure properties so that the water content of bacterial cells is reduced and bacteria will experience plasmolysis (Hambali, et al. 2002).

4) Sugar Merah

Brown sugar is yellowish brown to dark brown and generally reddish brown. Brown sugar also has distinctive properties, has a sweet taste and a slight sour taste that cannot be replaced by other types of sugars (Hambali, et al., 2002). Brown sugar is produced from the processing of palm nira. Nira palm liquid obtained from palm trees, palms. The composition of brown sugar is water 1.6 g, energy 376 kcal, protein 0 g, total fat 0 g and carbohydrates 97.3 g in 100 g brown sugar.

The use of brown sugar in the manufacture of milkfish satay is to help balance the taste. The use of brown sugar must be combined with white sugar so that the taste of milkfish satay remains savory.

5) Coriander (*Coriandrum sativum*)

The application of coriander in foodstuffs is used to improve the flavor and taste of certain products, especially meat and fish. Coriander is also useful for disguising the fishy aroma of milkfish meat. Chemical compounds contained in coriander include saponins, flavonoids, tannins (Putri and Febrianto, 2006). The nutritional content of coriander in 100 g consists of 92.8 g of water, 20 kcal of energy, 2.36 g of protein, 0.588 g of fat and 2.59 g of carbohydrates.

6) Whitened P sugar

White sugar is sucrose extracted from sugarcane plants. The use of white sugar in the manufacture of milkfish satay to provide flavor. Sugar is used as a salt counterweight and at the same time a flavor enhancer.

7) Chili Merah (*Capsium annum*)

Chili plants contain a lot of vitamins A and C and contain capsaicin essential oil. Capsaicin compounds are what cause a spicy taste and provide heat warmth when used for spices (kitchen spices). The nutritional content per 100 g of cayenne pepper is protein 4.7 g, fat 2.4 g, carbohydrates 19.9 g, calcium 45 mg, phosphorus 85 g, iron 2.5 g, vitamin A 11,050 SI, vitamin B1 0.24 mg, vitamin C 70 mg and water 71.2 g.

8) Coconut Milk Kelapa

Coconut milk is processed water made from grated coconut juice. The use of coconut milk in the manufacture of milkfish satay is to provide a savory taste sensation and strengthen the deliciousness of the existing taste. Coconutantan is a dough filler material that is characteristic of milk satay.

C. Stage Pmbuatan Sate Bandeng

The stages of making bandeng satay at each processor in the Serang, ProvBanten-Indonesia insi region vary. In general, the stages of making satay bandeng are as follows:

1. First of all the milkfish is washed thoroughly, after washing then combed, after being combed then in the dodol (removed) meat.
2. Milkfish meat that has been removed is then mashed using a grinder. After that, the fish meat that has been smoothed will be filtered using a sieve. The filter is specifically for Bandeng.
3. Using the sieve, the meat of the fish itself separates from the thorns, and these thorns will be discarded.
4. Smooth and tender fish meat, separated from these thorns is mixed with prepared seasonings. Previously all the spices mentioned above were kneaded until soft.
5. After the fine seasoning is then sautéed and mixed with thick coconut milk water. Condensed coconut milk water before in godog (boiled) first, just cooled.
6. All the spices that have been mixed are then added with milkfish meat that has been smooth or soft until it becomes a mushy dough.

The next process is to put this mushy dough into the skin of the milkfish by being crammed or put in the skin of the milkfish that has been empty earlier. After the milkfish skin is filled with meat dough, then the milkfish is clamped with bamboo pins that have been prepared, and at the end of this bamboo clip will be given banana fronds so as not to escape when burned (baked on a fire furnace). The size of the clamp is adjusted to the size of the milkfish, usually ranging from approximately 30 to 35 cm. After finishing in the flops, the milkfish is then grilled or burned on the stove.

D. Quality Produk Sate Ikan Bandeng

The quality of milkfish satay can be assessed from 2 parameters, namely organoleptic and chemical. Organizational parameters include the appearance and taste of the product. Chemical parameters include water content, p rotein and product fat.

Product appearance includes color, texture and size. Milkfish satay products have a blackish brown or brownish yellow color. The brown color that occurs in the milkfish satay is due to the maillard reaction, which is a reaction that occurs between sugar and protein during the process of burning / heating milk bandeng satay. The texture of the milkfish satay on the outside and soft on the inside.

The taste of milkfish satay is obtained from a number of added spices. Satay bandeng has a rather sweet and savory taste with a coriander aroma and a distinctive smell from grilled food. Smell and taste are produced by the Maillard reaction to the combustion process because amino α acids react with dicarbonyl compounds, then amino acids are converted into aldehydes with the atom reduced by one. This aldehyde compound plays a role in the baked food. The quality of milkfish satay is based on its chemical parameters as found in Table 1.

Table 1. Composition of milkfish satay and fresh milkfish per 100 gr sample

Component	Satay bandeng*	Fresh milkfish**
Water content (%)	44,89	75,86
Protein Content (%)	11,81	20,49
Fat Content (%)	23,49	0,72
Ash Content (%)	3,43	2,81

*) Umoro and Suprayitno, 2012.

***) Hafiludin, 2015

The protein, fat and satay content of milkfish is higher while the water content is lower than fresh badeng fish (Table 1.1). Processing milkfish can increase the nutritional value per 100 g of sample. The increase can be caused by evaporation of water content during the combustion process and the addition of spices during the processing process.

CONCLUSION

Based on the literature study obtained information that the ingredients used in making milkfish satay are milkfish, salt, white sugar, brown sugar, coriander, onions, red pepper and coconut milk. The stage of making milkfish satay consists of the production of milkfish meat, the production of thorns from fish meat, making seasoning, donating namely mixing seasoning with milkfish meat, filling dough on the skin of milkfish and burning. The quality of milkfish satay is assessed from organoleptic and chemical parameters. The quality of the organoleptik satay of milkfish is brownish yellow, dense texture and compulsion on the outside and soft on the inside, the taste is rather sweet and savory with the aroma of coriander and the characteristic smell of grilled food. The chemical quality of milkfish satay is higher than fresh milkfish.

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