

## CHAPTER II

### LITERATURE REVIEW

#### 2.1 Ingredients

##### 2.1.1 Tofu Skin

Tofu is a non-fermented soybean product that is liked and popular in Indonesia, like tempeh, soy sauce and tauco. Tofu is a processed soybean product originating from mainland China. Making tofu and soy milk was discovered by Liu An during the Han Dynasty, approximately 164 years before Christ. The composition of nutrients in tofu is quite good. Tofu has a protein content of 812%, while the protein quality which is expressed as NPU is 65%. Tofu also has very high digestibility because most of the water-soluble fiber and carbohydrates are wasted in the manufacturing process. With a digestibility of around 95%, tofu can be consumed safely by all age groups from infants to adults, including people with digestive disorders (Shurtleff and Aoyagi 2021).

Dry tofu usually if we are going to use it we need to soak it first so that it is soft. It is usually served in soup or as a snack (Sarwono and Saragih, 2020). Tofu is perishable. Under normal conditions (room temperature) the average durability is around 1-2 days. After exceeding this limit, the taste becomes sour and deviations in color, aroma and texture occur so that it is not suitable for consumption. This is due to the relatively high water and protein content of tofu, 86 percent and 8-12 percent, respectively. Tofu contains 4.8 percent fat and 1.6 percent carbohydrates. With this nutritional composition, tofu is a suitable medium for the growth of decomposing microorganisms, especially bacteria (Koswara, 2019).

Tofu skin, also known as yuba, is a popular ingredient in Asian cuisine. It is made by skimming the surface of soy milk as it coagulates, resulting in thin sheets that are often dried or packaged in rolls. Tofu skin has a unique texture and a delicate, slightly nutty flavor. Many people enjoy tofu skin for its versatility in cooking. It can be used as a wrap for fillings, added to soups or stews for added texture, or sliced and stir-fried. Its ability to absorb flavors makes it a great choice for marinades and sauces.

In terms of nutrition, tofu skin is a good source of plant-based protein and contains essential amino acids. It is also low in calories and fat, making it a healthy option for those watching their intake. Overall, the taste and texture of tofu skin may not appeal to everyone, as it can be slightly chewy or rubbery. However, it has a loyal following among those who enjoy its unique qualities and use it creatively in their dishes.

## **2.2 Products**

Dendeng is one of the traditional or conventional processed dried meat products, which is the result of a combination process of curing and drying, by cutting it into thin sheets, then adding salt pepper, sugar and table salt and seasonings in the form of spices, for example coriander, garlic, shallots, galangal and ginger (Bintoro et al., 2021). The process of making dendeng is a combination of curing and drying processes. The curing process is the seasoning process with the aim of preserving, improving the color, taste, aroma and texture of the meat. There are two curing methods, namely, the dry method and the wet method. The dry method of curing is carried out by covering the jerky ingredients with mashed curing ingredients, while the wet method is carried out by soaking the jerky ingredients with mashed curing ingredients and making a solution (Fachruddin, 2019). The drying process aims to reduce the water in the material to a certain extent by evaporating the water in the material using heat energy. During the drying process, changes in color, texture, aroma and nutrients also occur. Reducing the water content in beef jerky results in increased protein concentration. The maximum water content for jerky is in accordance with the quality requirements for jerky, which is 12% (SNI 01 – 2908, 2019).

The characteristics of good beef jerky are blackish brown in color, the meat sheets are relatively thin, there are no greenish white spots caused by fungus and the surface of beef jerky still feels a bit wet because beef jerky has a moisture content of around 20-40%. The brown color that occurs in beef jerky is caused by the addition of brown sugar to the meat, because in beef jerky there is a browning reaction that is not caused by enzyme activity (non-enzymatic browning), namely the reaction between free amino acids from protein in meat and reducing sugar carbonyl groups (Sudarisman and Elvina, 2021).

The advantages and disadvantages of tofu jerky can vary depending on the brand and manufacturing method. Here are some possible common drawbacks and benefits associated with tofu jerky:

Disadvantages of Tofu Jerky:

1. Taste and Texture: Some people may not enjoy the taste and texture of tofu jerky, which differs from traditional meat jerky. Tofu jerky has a softer and less chewy texture compared to meat jerky.
2. Nutritional Content: Tofu jerky may have lower protein content compared to meat jerky, depending on the ingredients used. Additionally, some brands of tofu jerky may contain added sugar or preservatives that need to be taken into account.

Advantages of Tofu Jerky:

1. Plant-Based Protein Source: Tofu jerky is a great alternative for those following a plant-based or vegetarian/vegan diet. Tofu itself is a good source of plant-based protein and can provide a healthy protein intake.
2. Low in Fat: Tofu jerky generally has a lower fat content compared to meat jerky, making it a lighter option.
3. Flavor Variety: Tofu jerky often comes in various flavor variants, such as spicy, savory, or sweet, which can cater to individual tastes and preferences.

## **2.3 Processes**

### **2.3.1 Drying**

Tofu jerky is a food product produced through the drying process of tofu skin. Drying is a crucial stage in the making of tofu jerky as it has several key benefits that affect the texture, flavor, shelf life, and safety of the product. Removing water enhances the concentration of flavors in tofu. This means that the flavors from the seasonings or spices used to marinate the tofu before drying will penetrate more deeply into the final product, resulting in a stronger and richer taste. Water serves as a medium for the growth of bacteria, fungi, and other microorganisms. By drying the marinated tofu skin and

reducing its water content, microbial growth is inhibited. This prolongs the shelf life of tofu jerky and preserves its quality for a longer duration. In products like jerky, excess water can provide a breeding ground for harmful pathogenic microorganisms. Drying helps reduce the risk of contamination and keeps the product safe for consumption.

Although drying reduces water content, some nutrients are retained in tofu jerky. These include proteins, fibers, and other nutrients originating from tofu. Products with high water content are more susceptible to physical damage and weather changes during transportation and storage. By drying tofu into jerky, the product becomes more resilient to environmental changes. Overall, the drying process is a crucial stage in the production of tofu jerky, as it influences aspects such as texture, flavor, shelf life, safety, and nutrition of the final product.