

Processing Process of “Swiss Sausages” at PT. Widyaprasuti, Semarang

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Abstract— Widyaprasuti is a company in Banyumanik, Semarang engaged in the processing of Swiss Sausage. The purpose of the study was to directly determine the process of processing Swiss Sausage starting from the provision of raw materials, implementation of processing, machines and production tools, sanitation and hygiene, to the processing of the final product used in the processing of Swiss Sausage, expanding knowledge and insight in applying the knowledge learned. The research method used was by conducting direct observation and participating in the manufacture of Swiss Sausage at PT. Widyaprasuti, interviews, and literature studies related to Swiss Sausage. The results of the study showed that the processing process at PT. Widyaprasuti requires several ingredients such as beef and chicken, beef fat, vegetable oil, ice cubes, tapioca flour, fiber flour, TVP, ISP, nitrite, synthetic dyes, spices, potassium sorbate, sausage casings, LDPE plastic. The processing stages begin with cutting and grinding, weighing ingredients, grinding and mixing ingredients, filling and tying sausages, cooking, cooling, cutting sausage ties, packaging, and storing final products. **Keywords:** Swiss sausage, Widyaprasuti, processing process.

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I. INTRODUCTION

Meat is one of the nine Indonesian foods. The main components of meat are water, protein, fat, carbohydrates, and vitamins (Supriyatin et al., 2020). Meat is often a medium for microbial contamination because it has a high pH, between 5.5 and 6.3, which makes it very susceptible to microbial contamination (Ulfiani et al., 2022). Therefore, proper processing techniques are very important to reduce the level of damage while increasing the quality value of the product. There are many types of processed meat products around the world, one of which is commonly known is sausage.

Meat sausage is a processed food product consisting of a minimum of 35% meat then mixed with flour or starch and put into a casing with or without the addition of spices and other approved food additives. Sausage is a processed product made from meat as the main ingredient. The use of meat in sausage production is very crucial because it affects the texture, taste, and safety of the product to be consumed (Rumondor et al., 2018). In addition, Meat also functions as emulsion stability and the properties of the sausage produced (Surbakti et al., 2016). To produce quality products requires a system that monitors every step of the process, from the search for raw materials to the product reaching consumers.

Swiss sausage is one of the most famous types of sausage and its business shows a business model that combines tradition, high quality, and sustainable innovation in a limited production scale but has significant economic value. The purpose of this study is to understand the process of making Swiss sausage at PT. Widyaprasuti starting from the provision of raw materials, processing, production machines and tools, as well as sanitation and hygiene in processing Swiss sausage into high-quality products with guaranteed quality standards.

II. METHOD

The research method used is by conducting direct observation and participating in the making of meat sausages at

PT. Nindyaprasuti, interviews, and literature studies from books and the internet related to meat sausages. This research conducted for 2 months, starting from January 23, 2021 and finished on February 22, 2024.

III. RESULT AND DISCUSSION

Company Profile

PT. Widyaprasuti, founded on August 31, 1991 by Ir. Widyawan, is a company engaged in pre-harvest (vegetables and fruits), post-harvest (bread and processed meat), and restaurants. In its development, Ir. Widyawan came up with the idea to produce processed meat products, until in 1999, he started buying a sausage processing machine and tried to produce sausages on a trial scale. Initially, the company asked for consumer opinions through surveys and provided free sausages. In 2000, sausages began to be marketed to consumers. The demand for sausages branded "Nandisari" began to increase as evidenced by the increasing number of consumers from hotels in Semarang and its surroundings.

Products Produced

A product is a good or service provided by a producer that is offered to consumers. Each product produced by PT Widyaprasuti is given the trade name "NANDISARI". There are three types of products produced by PT Widyaprasuti, namely frozen meat, processed meat products and bakery and pastry. Frozen meat as requested by the shop (outlet) is fresh meat and special ground beef and chicken.

Product Marketing

Product marketing is a comprehensive process that includes market analysis, product distribution to consumers, and feedback collection. The purpose of this process is to identify a suitable market for the product and position it in such a way as to get a positive response from customers. Some of the marketing methods used by PT. Widyaprasuti are:

- Product sales are carried out by delivery to hotels, restaurants, bakeries, and catering services that have ordered the product.
- Consumers can also come directly to the store or order online through Tokopedia.
- Promotion is carried out through social media, such as Instagram.

Sausage Making Materials

There are three types of materials used in the sausage production process, namely raw materials, supporting materials, and packaging materials. Raw materials are the main components in making products, which include beef, chicken, beef fat, ice, oil, and Isolate Soy Protein, which must meet company standards and agreements with suppliers. Supporting materials are additional ingredients that also need to meet company standards, including tapioca flour, Textured Vegetable Protein (TVP), fiber flour, nitrite, coloring, spices, potassium sorbate. Packaging materials are the final component in the sausage processing process that must meet company standards, including sausage casings and plastic.

Processing Stages

The processing stages of "Swiss Sausage" begin with cutting and grinding meat, weighing ingredients, grinding and mixing ingredients, filling and tying sausages, cooking, cooling, cutting sausage ties, packaging, and storing the final product.

Swiss Sausage Production Flowchart

The following is a flowchart of the Swiss Sausage processing process shown in Figure 1.

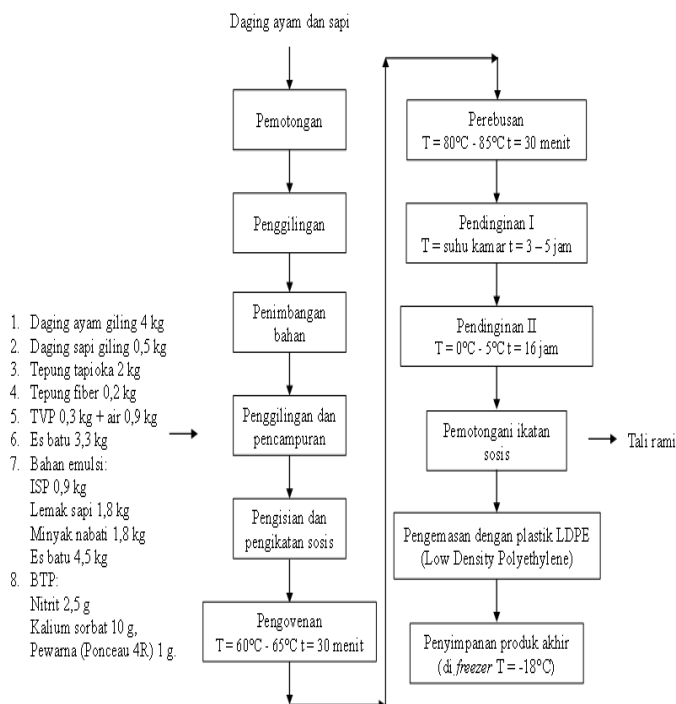


Figure 1. Swiss Sausage Processing Flowchart

Source: Personal Documentation, 2024

Machines and Equipment

A machine is a piece of equipment powered by a force or energy, which is used to assist humans in making certain products or product components (Hastary et al., 2021). The presence of machines makes the production process or activities related to organizational goals more efficient. The term machine generally refers to components that work together to carry out tasks. These tools often reduce the intensity of human work. For manufacturing companies, machines are important facilities that support production. The use of machines allows companies to reduce product failure rates, improve quality standards, and meet the timeliness of product completion according to customer requests, as well as make the use of raw materials more efficient (Dwiyama, 2018).

In the processing of "Swiss Sausage" at PT. Widyaprasuti there are 9 machines (Meat bone saw, meat grinder, bowl cutter, stuffer, chiller, date printing machine, vacuum packaging machine, freezer, and cold storage.) and tools (scales, sausage hangers, ovens, stoves, gas, klakat, baskets, plastic gloves, and scissors) used to assist in the sausage making process.

Sanitation and Hygiene System

Sanitation is a series of actions taken by individuals or communities to prevent health problems that can be caused by external environmental factors (Fahham, 2019). In simple terms, sanitation can be interpreted as an effort to maintain health. It can also be interpreted as a series of efforts made to maintain environmental health. (Marsanti et al, 2018).

The materials used in production are measured with sterile tools, and workers wash their hands before starting the processing process. Tools are cleaned every day after processing. At PT Widyaprasuti, sanitation and hygiene of equipment and supplies are realized by washing all equipment and tools used to make sausage products. The sanitation process is divided into 3 stages, namely: Cleaning, washing, Disinfection Process

In addition, for sanitation, production employees use PPE including masks, hairnets, aprons, boots, and plastic gloves. Employees must also wash their hands with soap every hour or before starting production activities.

IV. CONCLUSION AND SUGGESTION

Conclusion

- Raw materials for Swiss sausage produced by PT. Widyaprasuti consist of beef, chicken, ice cubes, beef fat, oil, ISP (Isolate soy protein). Supporting materials: tapioca flour, fiber flour, nitrite, synthetic dyes, TVP (Texture vegetable protein), spices, and potassium sorbate. Packaging materials: sausage casings and LDPE plastic.
- The process of making Swiss sausage consists of cutting and grinding, weighing ingredients, grinding and mixing ingredients, filling and tying sausages, cooking (oven and boil), cooling, cutting sausage ties, packaging, and storing final products.
- Making Swiss sausage products, assisted by 9 machines and nine tools
- The sanitation and hygiene system at PT. Widyaprasuti includes sanitation of tools, sanitation of production rooms, sanitation of production employees

Suggestion

1. It is important to organize training for workers periodically to reduce the number of defective products.
2. Sanitation and cleanliness of production equipment must be observed so that the product is not contaminated by bacteria on the equipment.
3. lack of exhaust and air ventilation in the production room

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