



Development Strategy of WingkoBabat Industry with Good Manufacturing Practices (GMP) Method

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ABSTRACT

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Wingko is a typical food that comes from Babat, Lamongan. To maintain product quality and safety, SME WingkoBabat needs to implement Good Manufacturing Practices (GMP). The research method used is Good Manufacturing Practices (GMP) method. GMP is carried out in 3 stages namely, Assessment of 14 aspects and 37 sub aspects of GMP, Determination of GMP levels, and Corrective Actions. Based on the assessment of aspects and sub-aspects of GMP, there were 9 deviations, namely 1 major deviation, 5 serious deviations, and 3 critical deviations. With 9 such deviations, SME WingkoBabat is included in level 4. Corrective action is carried out on deviations that occur by taking into account the types of irregularities, responsibility, audit frequency, and the deadline for repairs. So that with an increase in product quality, WingkoBabat will be able to compete with modern food and increase product sales

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1. Introduction

Wingko is a traditional food that comes from Babat, Lamongan. In its development, Wingko was spread in various regions, such as Semarang and several areas in Lamongan. As a superior product of Lamongan Regency, the existence of Wingko must be maintained and developed. Many ways that can be done are somewhat able to survive with modern food competition. One way that can be done to maintain the quality of tripe wingko is to apply the Good Manufacturing Practices (GMP) method. The application of GMP is intended to determine the feasibility of production in an industry as well as a measure of improvements to be made (Ristyandi 2012).

Food Safety is the condition of food in a state free from interference in the form of pollution or contamination. The disorder is in the form of chemical, biological, and other objects that can harm and even endanger health. Food safety is functioned so that a food product is safe for consumption. Every food production of finished products and raw materials must carry out food safety in accordance with the regulated food safety standards and criteria. Food safety supervision is carried out by the government and can coordinate with the community. One of the implementations of food safety is the provision of guarantees on food quality.

Food quality assurance can be realized by implementing a good GMP food production system. GMP based on Regulation of the Minister of Agriculture No. 20 of 2010 clearly defined as a guide for processing good agricultural products in order to obtain food products that are suitable and safe for consumption. The regulation also explains that the application of GMP is one of the basic requirements in the implementation of quality assurance and food safety programs. Although it was only established as a basic requirement in 2010, good food processing guidelines have been regulated since 1978 by the Minister of Health of the Republic of Indonesia. Regulation of the Minister of Health of the Republic of Indonesia 1978 concerning Guidelines for Good Food Production methods must consider 13 aspects.

2. Research Methods

The research method used is Good Manufacturing Practices (GMP). The data that has been obtained in the form of primary data and secondary data is then processed in accordance with the procedures for inspection of household industrial production facilities that are reflected in the Regulation of the Head of BPOM Number HK.03.1.23.04.12.2207 Year 2012. In the procedure, the data processing begins with filling



in the inspection form. IRT production facility which contains general IRT data and determination of non-conformity of IRT food production facilities.

3. Research Results and Discussion

According to the Food and Drug Supervisory Agency (2012), Good Manufacturing Practices (GMP) is an important factor for meeting the quality standards of food safety requirements set for food. GMP affects the survival of the food industry, both small, medium and large scale industries. The existence of the application of GMP in the food industry is an important factor to produce quality food, suitable for consumption and safe for health. The application of GMP in this study was carried out in the wingko industry in Wingko Babat SMEs.

A. Production Location and Environment

The food and drug regulatory agency have regulated the environment and production locations of the home industry in the 2012 BPOM regulation, which is that the environment should always be kept clean. Environmental cleanliness is carried out by disposing of rubbish regularly and not letting garbage accumulate, besides that the garbage bin must be closed. While related to the location of the industry it should be kept clean, free from garbage, odors, smoke, dirt, and dust. There are deviations into the category of serious non-compliance. These criteria have not been well considered in Wingko Babat SMEs. The environment around the industry is still found scattered and dusty garbage.

B. Building and Facilities

Buildings include the design and layout, floors, walls or room dividers, ceilings, doorways, windows, ventilation holes and ventilation, work surface, and the use of glass materials. While the facilities include the completeness of the production space and storage area. Deviations in the location of the production environment also occur in the second aspect. Based on these conditions, an assessment of non-conformity was found in aspects of the building and facilities. But with adequate space is not balanced with a clean floor, walls, and ceiling. The floor of SMEs Wingko Babat looks dirty and dusty, the walls look black and dusty, the ceiling looks dusty and cobwebs are found, this happens because there is no routine maintenance.

C. Production Equipment

Production equipment is related to the material requirements of production equipment. Production equipment should be made of strong material so that it is durable, easily removed and dismantled so that it is easy to clean and maintain. The surface of the equipment which is in direct contact with food must be smooth, not perforated, not peeling, not rusty, and does not absorb water so that the equipment does not cause contamination of food products. SMEs Wingko Babat currently no longer uses a measuring instrument because the materials purchased from suppliers already have the requested size. However, this includes serious non-conformities because those responsible for production must ensure the consistency of production by ensuring the accuracy of the composition of the materials used. Can anticipate if there is a fraud on the size given by the material supplier.

D. Water Supply or Water Supply Facility

Water supply and water supply facilities referred to in this 2012 BPOM regulation are the water used must be clean and must be in sufficient quantity and sufficient. The limitation of clean water in the application of GMP is water that is clean, clear, and does not smell. Water supply in SMEs WingkoBabat has been fulfilled well, the water used for production uses clean water that comes from refilled water. The supply of water and maintained supplies makes the quality of the products produced guaranteed. Besides that, the water used for washing coconut and equipment comes from groundwater. Different water for bathing and toilet use water pam. The different types of water are adjusted to the needs and costs incurred for water supply in SMEs WingkoBabat..

E. Hygiene and Sanitation Facilities and Activities

Hygiene and sanitation facilities cover many sub-aspects. First, cleaning and washing facilities. Cleaning and washing facilities such as brooms, brushes, feather duster should be available and monitored. Cleaning and washing facilities must be equipped with a good source of water. Second, employee hygiene facilities. Employee hygiene facilities such as toilets should be available in sufficient quantities and clean to prevent contamination. The next sub aspect is a means of washing hands. This facility should be placed near the production room and equipped with a handwashing soap, equipped with a dryer such as a towel, and covered with a trash can. Next is the toilet facilities that should be designed with regard to hygiene requirements. There is a source of water that flows, maintained and clean, and a door that does not lead to the production flow. The next sub aspect is the disposal of water and waste. Other facilities are landfills. The landfill in SMEs is covered with plastic bags that are replaced every day and are always closed. In addition to outside the production room, there are several bins provided in the production room including bins for



coconut husks, bins for banana leaves (roasting tools), and bins for plastic and paper. The rubbish bin was deliberately set apart intended to make it easier for workers to dispose of garbage and care for the trash.

F. Employee Health and Hygiene

Employee health and hygiene includes employee health, hygiene, and habits. Employees must be in good health, and if sick they are not allowed to enter the production room. If the employee shows symptoms or suffers from an infectious disease, the employee is not allowed to enter the production room. Likewise, if there are injuries to the body of the employee it must be closed. In addition to being healthy, employees must also maintain a clean body. Employees should also wear clean clothes. Maintaining cleanliness of the body must be done by washing hands with soap before and after handling a production process. The Health and hygiene of employees must also be balanced with the habits of employees. Habits such as eating, drinking, smoking, spitting should not be carried out around the production area to avoid contamination of food products. Employees should also not wear jewelry that could jeopardize product safety.

G. Maintenance and the Hygiene and Sanitation Program

The aspects of Maintenance and the Hygiene and Sanitation Program include the maintenance and cleaning of the environment, buildings, and equipment that are supposed to be maintained and functioning properly. Equipment must be cleaned regularly. The process of cleaning the equipment is recommended to follow the specified procedure. Cleaning and sanitizing procedures use physical processes and chemical processes within reasonable limits. SMEs Wingko Babat uses special soap to wash hands, and it is carried out according to the procedure. The hygiene and sanitation program is carried out regularly and regularly before and after the production process. In the production room, there are no pests in the form of wandering pets, to reduce contamination and contamination processes in the processed product. Aside from pets, another thing that can cause contamination is a trash bin left. SMEs Wingko Babat has carried out routine garbage disposal after each production.

H. Storage

The storage of ingredients and final products should be placed in a separate place. The place used must be clean, by the storage temperature, adequate lighting, and free of pests. Storage of materials and final products should not touch the floor, walls or ceiling. Besides storage must be carried out using the system FIFO (First In First Out) and FEFO (First Expired First Out) meaning that the product exit process must be adjusted to the product that is first entered to be issued first or products with an expiration date will be issued first. Other storage regulated in this regulation is the storage of hazardous materials. Hazardous materials such as soap, insect poisons, rat traps, and other sanitary materials must be kept separate from other ingredients and monitored. The next storage is the storage of production equipment. Clean and unused equipment storage must be placed separately from other equipment and dry.

I. Process Control

The production process of an industry must be carried out correctly to produce quality and consistent products. Control of the production process can be done by setting material specifications, composition, and formulations, how to produce raw materials, and making complete information about the product to be produced (product name, production date, and expiration date). Material specifications must be set correctly. Material specifications include material requirements and water requirements. Materials in the form of raw materials, supplementary materials, auxiliary materials, and food additives must be by established quality standards. While the water used must be different between water for auxiliary materials, washing, and MCK. Process control conditions in Wingko Babat SMEs do not have records in every production process starting from purchasing raw materials. The raw material used is new raw material and is not damaged, so it is not dangerous and safe for consumption. This industry has a food production flow chart so that each employee understands and understands the production flow. The packaging used uses special materials for food in the form of paper for primary and secondary packaging there are 3 types of packaging options namely: plastic bags, paper bags, and cardboard boxes. SMEs Wingko Babat does not use Food Additives.

J. Food Labeling

Household industrial food labels must meet the provisions stipulated in government regulations. The label in question is information on the product name, product composition, net weight, name and address of the industry, expiration date, production code, and P-IRT number. Food labels may not include health claims or nutritional claims. Food labels used in SMEs Wingko Babat already include the product name, industry address, and service number. However, food labels do not include the composition or ingredients used to produce wingko, expiry dates, and production codes. SMEs Wingko Babat does not include health or nutrition claims.

K. Supervision by the person in charge

The responsible party must know about food hygiene and sanitation and the production process, with proof of having an extension certificate in the form of PKP. The responsible party should carry out routine supervision. Supervision is carried out on materials and processes. Supervision of materials is done by ensuring that the materials meet the quality requirements made. Supervision should be carried out by recording and maintaining these records. Process control should be carried out by ensuring that each stage of the process runs well, incoming materials and finished products, and ensuring the accuracy of each processing unit. The Klapa Muda wingko industry already has a person in charge who has a certificate, and the owner or person responsible always supervises each stage of production, starting from good coconut inspection for production, evening the mixture of the mixture, the level of maturity during the roasting process, and the packaging process. Corrective action is also taken if there is a discrepancy with the process and standards set by the owner.

L. Product Withdrawal

Product withdrawal is carried out by stopping the circulation of food because it is found or suspected as a source of disease. The owner must stop production until the problem is resolved. Products are produced under the same conditions and SMEs Wingko Babat has trading partners in the form of peddlers and small shanties around the market. This makes the owner of the industry has special treatment for this trading partner. Such treatment is in the form of withdrawal of goods if the goods have not been sold until the expiry deadline (1 week). In addition to the specified time, if the product is found to be hard, rancid, and moldy, the product must also be withdrawn. The product that is withdrawn cannot be reprocessed and sold to fish pond owners that are used for fish feed. The policy must be carried out because the industry wants to provide the best service for consumers and so that consumer confidence is maintained.

M. Recording and Documentation

The owner should document the incoming material (raw material, supplementary material, and supporting material) and outgoing (finished product). Documentation of incoming materials should be written down containing at least the name of the material, quantity, date of purchase, name, and address of the supplier. For products that contain at least the product name, production date, production code, quantity and place of the seller or distributor. Records should be kept accurate and up to date. The owner of SMEs Wingko Babat has recorded each production. There are many records taken by the owners of this industry. The notes are, the entry of raw materials that are entered, the amount of production every day, ordering primary and secondary packaging, orders and sales of wingko, and sales to each trading partner.

N. Employee training

The owner or the person in charge must have followed the counseling about CPPB-IRT. The owner and the person in charge must apply and teach this knowledge to their employees. Employee training is conducted so that employees can detect risks that may occur at stages or in materials through certain symptoms. The owner or the person in charge of SMEs Wingko Babat has participated in counseling on how to produce good food for the home industry. The person in charge has also applied and taught knowledge and skills to all employees in each part of the production. The industry owner has attended a training on Good Food Production Methods by the Department of Health in 2013. Training received by industry owners is then taught to employees. After it has been circulated, withdrawals must be immediately carried out. Industry owners should report the withdrawal of products related to food safety to the local Regency/City Government. The responsible industry can prepare procedures for withdrawing food products

O. Analysis of Good Manufacturing Practices

Corrective action for serious incompatibility in number A.1 of the dusty IRTTP environment in the processing due to the combustion process to cause a lack of product quality assurance is monitoring environmental sanitation before and after the production process of dust due to the combustion process, monitoring is carried out by looking at the environmental conditions around the industry and make sure the environment is okay. If dust from combustion is found to spread in the environment around the industry, an improvement should be made to the design of the chimney where the burning dust comes out. Therefore it is necessary to form a GMP team. The GMP team consists of 5 people consisting of 1 chairman, 1 secretary, and 3 members. The team leader must have experience in preparing GMP and have attended GMP certification training, the secretary must also have experience in preparing GMP, and 3 members must consist of the production department and related engineers.

Subsequent serious discrepancies in number A.3 found cobwebs and dust on the ceiling of the processing site, causing cross-contamination to the product. Corrective action taken for this deviation is the cleaning of cobwebs and dust on the ceiling and the installation of platforms in the processing room and periodic monitoring in the processing room. Cleaning the cobwebs and dust on the ceiling is done by using a



broom or feather duster that can reach the place. Monitoring is carried out once a day, monitoring is carried out according to industry level.

Corrective action for serious deviations number C.7 The use of raw materials and additives that do not use scales in the processing room to cause a lack of product quality assurance is the provision of scales and periodic monitoring of equipment. Measuring instruments that must be available are measuring devices that have a size by the needs of production every day. The size of the scale is a scale with a weight concentration of 0.5-15 kg. and periodic monitoring must be carried out. Monitoring must be carried out according to industry level. monitoring in SMEs WingkoBabat is done once a day.

The next serious deviation is that in number F.15 the employee does not wear work clothes in the production section, causing cross-contamination to the product. Improvements made are the provision of employee sanitary hygiene facilities (gloves, aprons, and head coverings). Procurement of these facilities must be adjusted to the number of employees and industry needs, such as for visitors or who want to enter the production room. The adjustment was made by the GMP team mentioned earlier. The team also conducted training for production employees on the importance of using hygiene and sanitation facilities.

The improvement for major nonconformity number F.17 there are activities of employees eating and drinking at the processing site to cause cross contamination to the product is the training of employees about SOPs entering the processing and monitoring process when the production process is carried out by the GMP team formed or bringing experts in that field. The importance of the training is because employees are always in touch with the product from beginning to end, so employees must understand about it.

Subsequent discrepancies in H.23 of food and packaging materials are stored in the same room and placed in a humid place, clinging to walls and floors, causing cross-contamination to the product. The discrepancy is critical. Corrective action that can be done is by providing additional facilities (room boundary between the packaging material and the final product, pallet for the final product) and the formation of the GMP Team. Room dividers for the final product and other materials must be held, the bulkhead can be done by giving a board as a room boundary. Besides, there must be a pallet for the final product, the pallet must be adjusted to the weight of the product stack and the area of the product after it is packaged. This was done by the GMP team.

Corrective action on critical deviation number I.25 The industry does not have a record of the use of damaged raw materials, hazardous materials, additives which are not suitable, causing a lack of food safety. The owner forms the person in charge of recording the materials used include damaged, dangerous, and additives. Participated in process control and GMP training. The responsible person must be someone who understands and is an expert in the field, evidenced by having participated in related training.

Serious deviations in number I.28 there is no labeling on food additives used and the storage space for materials does not yet exist, causing a lack of product quality assurance needs to be improved. Improvements made for the intersection are labeling and making storage space for food additives and periodic space sanitation monitoring. The making of storage space must be adjusted to the storage capacity and the timetable for the entry of the raw materials. Besides, monitoring for these deviations must also be done regularly, namely every heart. Monitoring is carried out according to industry level categories.

Improvements to the critical deviation number J.30 lack of complete information in the label in the form of expiration, net weight, and production code is the owner to change the packaging design and complete the label according to applicable regulations. Adjusting the packaging design must still pay attention to the aesthetic value and not leave the characteristics of the packaging of wingko tripe products.

The results of the discrepancies above have been identified and recommendations for corrective action are given, so that in the future SMEs WingkoBabat can re-arrange and correct all the deficiencies. Improvements can be carried out in stages until conditions in SMEs WingkoBabat fall into the Level I or Level II categories. Level I and Level II categories indicate the industry is eligible for SPP-IRT. So that with an increase in product quality, WingkoBabat will be able to compete with modern food and increase product sales.

4. Conclusion

The conclusion of this study is the assessment of aspects and sub-aspects of GMP obtained 9 deviations, namely 1 major deviation, 5 serious deviations, and 3 critical deviations. With 9 such deviations, SMEs WingkoBabat is included in level 4. Corrective action is carried out on deviations that occur by taking into account the types of irregularities, responsibility, audit frequency, and the deadline for repairs. So that with an increase in product quality, WingkoBabat will be able to compete with modern food and increase product sales.

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