

Analysis of the Implementation Hygienic Sanitation and Food Security in ABC Meatballs Industry in Jakarta

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ABSTRACT

Consumption of favorite foods such as meatballs that are not guaranteed to be safe can be harmful to health. Data obtained from the BPOM Quarterly Report (2017) states that there were 507 incidents of food poisoning. In January 2018, poisoning took place at the Al-Qomariyah boarding school. In February 2018, poisoning occurred in Sikka District, NTT. And the latest case is in September, with 213 people in NTB experiencing mass poisoning due to meatballs. Meatballs are foods made from round meat, usually served with gravy. The purpose this research is analyze the application of hygiene and food safety hygiene in ABC meatballs industry in Jakarta, starting from the place and tools of production, final products, and employees. This research includes descriptive research. The research method uses a qualitative approach with observation and interview methods. The results of the study show all employees in ABC meatballs industry are in good health and not in a condition of having a skin disease. All employees already getting used to washing hands. The ABC meatball industry has chosen a safe and non-contaminated production site and intact and good production equipment. The final product is cleaned first before being stored in a storage area. As well as implementing a sanitation process for the final product. Conclusions that can be taken in this study are based on the results of interviews with owners and employees of ABC meatball industry, observations on final product sanitation, production sites and production equipment, and employees, it can be concluded that ABC meatball industry has implemented a sanitation and food safety system in its production, although there are still a number of things that has not been done yet.

Keywords: Hygiene Sanitation, Meatballs Industry

I. INTRODUCTION

Food is the most important requirement for humans. Hygienic food processing is needed and is safe for consumption by the community. Foods that are not guaranteed to be safe can result in food

poisoning. Data obtained from the BPOM Quarterly Report (2017)[1] stated that there were 507 incidents of food poisoning. According to Anung, Director General of Public Health at the Ministry of Health, contaminated food can cause foodborne illness, especially for children and the elderly. The risk of poisoning can be minimized by efforts to monitor food in the commercial and household sectors, the need to improve food supervision, and the need to apply food sanitation hygiene principles. Food-worthy *hygiene* certificates are needed by traders to ensure the food served is safe for consumers.

One food product that is very in demand by Indonesians is meatballs. Meatballs are foods made from round meat, usually served with gravy. Almost no Indonesian has never enjoyed meatballs. Affordable prices and savory tastes make meatballs the most popular snack food. Meat-based food is indeed popular with all levels of society so that more and more people are trying to do business to produce meatballs. However, not all producers produce safely and hygienically. There have been several cases of meatball poisoning that have occurred. In January 2018, there was poisoning in the Al-Qomariya boarding school [2]. In February 2018, poisoning occurred in Sikka District, NTT [3]. And the latest case is in September, with 213 people in NTB experiencing mass poisoning due to meatballs [4]. These cases prove that not all producers or industrial meatballs produce hygienically and safely.

Laws relating to food safety aspects include Kepmenkes No. 942 / Menkes / SK / VII / 2003 and RI Government Regulation No. 28 of 2004 concerning food safety, quality and nutrition, in Article 9 PP No. 28 of 2004 explains that a good way to prepare ready-to-eat food must pay attention to aspects of food security by preventing the contamination of ready-to-eat food by biological contamination [5]. *Food safety* is an effort to prevent food from possible biological, chemical and other objects. Physical contamination of food can be prevented by the application of good hygienic food handlers, while chemical and biological contamination is prevented through sanitation of food

processing including the selection, storage and treatment of these materials, as well as the availability of sanitation facilities [6].

The purpose of this research is to analyze the application of hygiene and food safety hygiene in ABC meatballs industry in Jakarta, starting from the place and means of production, final products, and employees.

II. LITERATURE REVIEW

2.1 Good Manufacturing Practices (GMP)

GMP (Good Manufacturing Practices) is a guideline for the food industry, how to produce good food. GMP is the main prerequisite before a food industry can obtain a HACCP (Hazard Analysis Critical Control Point) system certificate [7]. GMP includes policies, procedures and methods as guidelines for adhering to quality and hygiene standards. This provides guidelines for producing food that is specifically compliant to help food manufacturers in pure manufacture and distribution and no food that is misbranded. Serves as a standard by which the government determines whether food is polluted. Thus, it is very important that each food producer and distributor understand the rules and develop systems and programs that prove compliance with this legal letter. Various criteria are included in the standard, including personal hygiene, food sanitation production facilities and design, process control and pestcontrol. This criterion is qualitatively explained in the standard and used as a basis for GMP assessment [8].

GMP can cover every aspect of food production, employees / cleaning and training staff, factories, and equipment / design tools and specifications, cleaning and sanitation and even warehousing and distribution of finished products [9]. GMP benefits include the following [10]:

1. Increase customer trust
2. Improve the image and competency of the company / organization
3. Increasing the opportunity of companies / organizations to enter the global market through products / packaging that are free of toxic materials (chemistry, physics, and biology)
4. Increase insight and knowledge of the product
5. Participate in food safety programs
6. Become a supporter of the implementation of a quality management system

2.2 Sanitation and Hygiene

Hygiene and sanitation have almost the same meaning and term, that is achieving good health. Hygiene is a preventive effort that focuses on the activities of individual health businesses. Whereas

sanitation is an environmental health business that pays more attention to hygiene issues to achieve health. In GMP there are four aspects that must be met, namely aspects of building sanitation, sanitation aspects of processing, aspects of sanitation equipment used and hygiene aspects of individual food handlers [7].

III. METHOD

This research includes descriptive research. The research method uses a qualitative approach with observation, and interview methods. The research site is in one of the meatballs industry in Jakarta. Obtaining data from interviews and observations. The variables used in this study are places and means of production, final products, and employees. Interviews and observations in the form of answer questionnaires with two categories being yes or no. Determination of criteria meets the requirements or not for the answer to the questionnaire based on the Decree of the Minister of Health of the Republic of Indonesia No. 23/MENKES/SK/I/1978 [11].

IV. RESULTS AND DISCUSSION

Production Sites and Tools

Data on the conditions in the production process of meatball industry are obtained by observing the conditions of the four production processes. Table 1. show that ABC meatballs industry has considered the condition of the production site. Most of the meatball industry does the production process in their homes. The place of production is different from the private kitchen of the industrial owner and in good condition, the condition of the equipment is good and also intact and not contaminated, there is sufficient ventilation, and sufficient water to meet production needs. There are some shortcomings in the ABC meatballs industry, which are like production sites adjacent to houses or other facilities, there is no division of the main production rooms and complementary production rooms, as well as the number of toilets and hand washing places that are not comparable to the number of existing employees.

Table 1. Application of *Good Manufacturing Practices* Standards in ABC Meatball Industry

Element	Description	Yes	Not
Location	Is the building in a pollution free place?	√	
	Does the building have good drainage?	√	
	Is the building not adjacent to a house or other facilities?		√
	Are buildings not located in paddy fields or sewage and garbage?	√	
Building	Does the building have a main room and a complementary room?		√
	Does the main room have an area that matches the type and production capacity?	√	
	Does the main room have an arrangement of parts arranged according to the order of the production process ?	√	
	Does the complementary room have an area that matches the number of employees working?		√
	Does the complementary room have an arrangement of parts arranged according to the sequence of activities?		√
	Does the building have water-tight floors?	√	
	Does the building have floors that are waterproof, salt, alkaline, acidic, or other chemicals?	√	
	Does the meeting between the floor and the wall not form a dead angle?		√
	Does the floor have a flat, flat and smooth surface?	√	
	Is the floor not slippery and easy to clean?	√	
		√	
	Is the wall at least 20 cm below and 20 cm above the floor?		
	Is the wall surface smooth, flat, and brightly colored?	√	
	Is the wall easy to clean?	√	
		√	
	Are walls resistant to water, salt, bases, acids or other chemicals?		
	Is the roof made of durable material, resistant to water, and does not leak?	√	
	Is the ceiling made of materials that are not easily brittle?	√	
	Does the ceiling have no holes and no cracks?	√	
	Is the ceiling durable and easy to clean?	√	
	Is the height of the floor at least 3 m?	√	
	Is the roof surface flat and brightly colored?	√	
	Is the door made of durable material?	√	
	Is the door surface flat, smooth, bright?	√	
	Is the door easy to clean?	√	
	Can the door be closed properly?	√	
	Does the door open out?		√
	Are windows made of durable material?	√	
Is the surface of the window flat, smooth and light-colored?	√		
Is the window easy to clean?	√		
Does the window have at least 1 m high from the floor?	√		
Does the window have an area that matches the size of the building?	√		
Is lighting in buildings in accordance with the requirements and requirements?	√		

	Does the building have ventilation that can guarantee good air circulation?	√	
	Does the building have a temperature regulator?		√
	Are ventilation holes equipped with tools that can prevent insects and dirt from entering?	√	
Sanitation Facility	Are the facilities for providing clean water sufficient?	√	
	Can water be channeled properly?	√	
	Are disposal facilities sufficient?	√	
	Is the toilet not open directly to the processing room ?	√	
	Is the toilet equipped with a hand sink?	√	
	Is the number of toilets according to the number of employees?	√	
		√	
	Is the hand washing place available at the entrance to the main room?		√
	Are hand washing facilities provided in sufficient quantities according to the number of employees?		√
	Can the toilet door close itself?		√
Production tools	Are the tools and equipment used according to the type of production?	√	
	Are the surfaces of tools and equipment related to food smooth, not hollow, and not peeling?	√	
		√	
	Are the tools and equipment used not absorbing water and not rusting?		
	Is the tool used easy to clean?	√	
Material	Have the raw materials, additives and auxiliary materials met the quality standards?	√	
	Did the organoleptic, physical, chemical, and microbiological examination have been used before the material was used?		√
Processing	Is there a basic formula for each type of product?	√	
	Does each processing unit have a manufacturing protocol?	√	
The final product	Does the final product meet quality standards?	√	
	Has the organoleptic, physical, chemical and microbiological examination done in the final product before being circulated?	√	
Laboratory	Does the laboratory inspect the raw materials, additional materials, and auxiliary materials used and the final product?		√
Employee	Are employees working in good health?	√	
	Are employees free from injuries and skin diseases?	√	
	Are employees regularly researched and monitored for their health?	√	
	Do employees use work clothes, including gloves, headgear, and appropriate shoes?	√	
	Do employees wash their hands before doing work?	√	
	Do employees refrain from eating, drinking, smoking, spitting while doing work?	√	
Container and Packaging	Can containers and wrappers protect and maintain the quality of their contents against outside influences?	√	
	Does the container and wrapper have no effect on the contents?	√	
	Is it made from ingredients that do not release parts or are there elements that can interfere with health?	√	

	Does the container and packaging guarantee the integrity and authenticity of the contents?	√	
	Are containers and wrappers resistant to treatment during processing, transportation and distribution?	√	
	Is it used before cleaning and sanitation?	√	
Label	Do the labels used meet the provisions in the Ministerial Regulation on Food Labeling and Advertising ?	√	
	Are labels made with different sizes, color combinations and different types of food?	√	
Storage	Are raw materials, additives, and auxiliary materials stored in each clean room?	√	
	Are raw materials, additives, and auxiliary materials marked between those that have not and have been examined?	√	
	Are raw materials, additives and auxiliary materials marked between those who meet the requirements and do not meet the requirements?	√	
	Are the raw materials, additives, and auxiliary materials and end products given a card system?		√
	Are hazardous materials given a separate room?	√	
		√	
	Are containers and wrappers neatly stored in a clean place?	√	
	Are labels properly stored and arranged neatly?	√	
	√		
	Are cleaned production equipment and supplies properly stored?		
Maintenance	Are buildings maintained regularly and regularly?	√	
	Is animal prevention done?	√	
		√	
	Is prevention of microorganisms, insects and rodents prevented?		
	Is solid waste collected to be buried, burned or processed?	√	
	Is waste water treated first before it is drained out?		√
	Are gas emissions regulated and processed before they are released?		√
	Are the tools and equipment cleaned and given sanitation measures regularly?	√	
		√	
	Are tools and equipment not related to food always clean?	√	
	Are the transport equipment and goods moving in the building always clean?	√	

The Final Product

Observation data on the final product can also be seen in Table 1. Table 1. indicates that the meatball industry has considered the expiration date or the expiration date of the product on their product label or brand. The ABC meatball industry has fulfilled the requirements of the Minister of Health Decree for final product results, cleaning process before storage and final product storage. The ABC meatball industry has also applied sanitation systems to products before being stored in storage. The sanitation system referred to here is the process of removing air in the packaging

or more commonly referred to as the vacuum process. The purpose of the vacuum process is for the product so that the quality of the food in it will be maintained so that when opened by consumers the quality is still maintained and suitable for consumption.

Employee

Employee hygiene and sanitation data obtained through observation. From Table 1, no employees working when ill, and no employees who have skin diseases, all employees use the shoes and work clothes

choco. From the table it can be seen also, all employees wash their hands before work, because almost all employees know that one contaminant that is quite influential on food ingredients is from the hand. Hand hygiene is very important for all employees who come in direct contact with food ingredients, because these habits can help prevent transmission of bacteria from the hand to food. From the results of interviews, most employees were able to refrain from eating and drinking while doing work. Employees also have regular health checks.

Food is said to meet the proper and safe conditions for consumption, which is food that has good conditions on the final and clean product, as well as good and intact places and means of production. In general, it can be said that the hygiene of food handlers or employees is quite good.

V. Conclusion

Based on the results of interviews with the owners and employees of the ABC meatball industry, observations on sanitation of final products, production sites and production equipment, and employees, it can be concluded that the ABC meatball industry has implemented a sanitation and food safety system in its production, although there are still some things that have not been done.

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