

Evaluation of the implementation of good manufacturing practices (gmp) in cv panda food, a special region of yogyakarta

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ABSTRACT

CV ABC is a company engaged in the snack food industry in the form of nori (seaweed) which Mr. Stenly Hendi Avanda founded in 2012. There are several products and various flavors offered by CV ABC, such as Mininori Seasoned Chicken and Roast Beef, Panda Seaweed Original Flavor, Spicy Flavor, and Barbeque Flavor. To keep the food free of potential biological, chemical, and other pollutants that could harm, interfere with, or otherwise put human health in jeopardy so that it is safe to consume, CV ABC needs to be evaluated on Good Manufacturing Practices (GMP). Mininori production, which refers to the Regulation of the Minister of Industry of the Republic of Indonesia Number 75/M-IND/PER/2010, consists of location, buildings, facilities and sanitation, machinery and equipment, materials, process control, final products, laboratories, workers, packaging, labels and product description, storage, maintenance and sanitation programs, transportation, documentation and recording, training, product recall and program implementation. The purpose of implementing the Practical Work is to implement GMP at CV ABC concerning the Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010 and the obstacles found in CV ABC in implementing GMP in Miniori production. The methods used in data collection are observation, interviews, direct practice, documentation, and literature study. The results are that CV ABC has not fully implemented the GMP Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010. There are 83.07% appropriate, and 16.93% non-conformance from 18 aspects due to human factors, materials, environment, and methods, namely doors, ventilation, and windows not equipped with screens, not having a laboratory, walls, and floors form elbows so that the production environment is challenging to clean, there is no pest prevention, lack of dryers or tissue and lack of firm action on GMP violators, lack of awareness in the implementation of sanitation, and there is still garbage that accumulates in the production room due to lack of monitoring from the head production that pollutes the environment.

Keywords: GMP, CV ABC, Mininori

INTRODUCTION

To make food safe for consumption, it must be kept free from biological, chemical, and other contaminants that could affect, harm, or risk human health. The Food and Drug Supervisory Agency (BPOM) has released a safety assurance system aimed at the food processing industry to produce high-quality and safe food to protect food to prevent damaging the population, namely Good Manufacturing Practices (GMP) or in Indonesian means *Cara Produksi Pangan Olahan yang Baik* (CPPOB) (BPOM RI, 2012). This rule is contained in the Regulation of the Minister of Industry of the Republic of Indonesia Number 75/M-IND/PER/2010, which consists of locations, buildings, facilities and sanitation, machinery and equipment, materials, process control, final products, laboratories, workers, packaging, labels and product description, storage, maintenance, and sanitation program, transportation, documentation and recording, training, product recall, and program implementation (Kemenperin RI, 2010).

In Indonesia, the development of GMP requirements refers to the Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010, which contains 18 aspects, namely

Location, and place of production, Building and production room, sanitation facilities, production equipment, materials, supervision, final product, laboratory, employees, packaging, labeling, storage, maintenance and sanitation programs, transportation, product recall, record keeping and documentation, employee training, and implementation of guidelines. GMP is a system that seeks to prevent cases related to food safety by taking into account the handling of raw materials.

Nori is a preparation in the form of dried seaweed made from red seaweed of the *Porphyra* type which can be added with spices such as ajitsuke nori. Nori, also known as laver, is an edible sheet of seaweed made from *Porphyra* algae. The manufacturing process is by pulverizing the seaweed and then placing it on a thin sheet to dry. After drying, the seaweed sheets are uniformly squared and packaged for commercial distribution. Due to the increasing demand for nori and due to the large amount of pollution around coastal waters, Japan imported nori from Korea (Riyanto, 2014).

A comparative study of the influence of two edible seaweeds, nori (*Porphyra tenera*) and wakame (*Undaria pinnatifida*), on dietary nutritive utilization showed that digestibility and retention coefficients for calcium, magnesium, zinc, iron, sodium and potassium were lower for wakame than nori. The seaweeds could be a good source of dietary fibre in diet but they may modify digestibility of dietary protein and minerals (Gudiel-Urbano, Montserrat & Goñi, Isabel, 2012).

Root Cause Analysis (RCA) is a problem solving process to investigate identified incidents, problems, concerns or non-conformances. RCA requires investigators to find solutions to pressing problems and understand the fundamental or underlying causes of a situation and treat the problem accordingly, thereby preventing the recurrence of the same problem, which may therefore involve identifying and managing processes, procedures, activities, behaviors or condition (British Retail Consortium, 2012).

CV ABC is a food industry that processes dried seaweed (Nori) into delicious snacks with various flavors, such as roast beef and seasoned chicken. It can be consumed by children, teenagers, and adults. Nori is a traditional Japanese food made from the red algae *Porphyra*. Nori is a preparation in the form of dried seaweed made from *Porphyra* red seaweed, which can be added with spices such as *ajitsuke nori*. Nori, also known as laver, is an edible sheet of seaweed made from *Porphyra* algae. The manufacturing process is by pulverizing seaweed and then placing it on a thin sheet to dry. After drying, the seaweed sheets are cut into squares uniformly and packaged for commercial distribution. Due to the increasing demand for nori and due to the large amount of pollution around coastal waters, Japan imports nori from Korea. Generally, nori is used to wrap sushi and onigiri with topping such as soups, noodles, and rice.

RESEARCH METHOD

Methods

Several ways of collecting data when carrying out practical work at CV ABC in the form of primary and secondary data are as follows:

1. Primary Data

Primary data is information gathered right away in the field. Through interviews and observations, preliminary data were obtained from business owners and the CV ABC production division. In the interview, information was obtained about suitable Food Production Methods at CV ABC to measure how it is handled in the production of mininori. At the observation stage, observations were made of the production process of Nori processed products in CV ABC from the beginning of product manufacture to the packaging process to facilitate data collection.

2. Secondary Data

Secondary data is complementary or supporting data from primary data containing general company information or other data. Secondary data is obtained in several ways, as follows:

a. Documentation

Data collection is done through observation, recording, then taking pictures in every work process carried out by CV ABC.

b. Study of Literature

The literature study method is carried out by collecting information through scientific journals or relevant references directly related to the research being carried out as a basis for problem-solving.

c. Checklist

To facilitate the evaluation, a checklist was made with the RI standard no. 75/M-ENG/PER/7/2010. Checklists can identify differences between one thing and another. This is done to strengthen the data obtained.

This research was conducted on April 4 – April 25, 2022. The place for this practical work is at CV ABC, which is located on Jl. Getsemani No.A 10, Joho, Condongcatu, Kec. Depok, Sleman Regency, Yogyakarta Special Region 55281.

RESULT AND DISCUSSION

Table analysis of suitability in the implementing GMP

Table I. Table analysis of suitability in implementing GMP at CV ABC.

No.	Aspects of GMP (Ministerial regulation RI Industry No. 75/M-IND/PER/7/2010)	Total requirements	Total		Percentage	
			Suitable	Not suitable	Suitable	Not suitable
1.	Location/place of production	4	3	1	75%	25%
2.	Production building and space	20	15	5	75%	25%
3.	Sanitary facilities	16	13	3	81,25%	18,75%
4.	Production tools	3	3	0	100%	0%
5.	Ingredient	5	5	0	100%	0%
6.	Process control	6	6	0	100%	0%
7.	Final product	2	1	1	50%	50%
8.	Laboratory	1	0	1	0%	100%
9.	Employee	8	8	0	100%	0%
10.	Packaging	5	5	0	100%	0%
11.	Label	1	1	0	100%	0%
12.	Storage	7	7	0	100%	0%
13.	Building maintenance and sanitation programs	5	4	1	80%	20%
14.	Freight	3	3	0	100%	0%
15.	Product recall	5	5	0	100%	0%
16.	Recording and documentation	4	4	0	100%	0%
17.	Employee training	2	2	0	100%	0%
18.	Implementation of guidelines	3	1	2	34%	66%
Total		100	86	14	83,07%	16,93%

The table analysis of suitability in the implementation of GMP is used to determine the percentage of CV ABC in implementing GMP utilizing the Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010 which contains 18 aspects or criteria which can be seen in Table I.

Table I shows that there are 14 non-conformities out of 100 requirements based on the Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010. The percentage of non-compliance with the implementation of GMP of 16.93%. Based on this percentage, it can be said that CV ABC has complied with and implemented the GMP with a percentage of 83.07%. Aspects of non-

conformance of as much as 16.93% cause still non-conformances. They need to be re-improved in the application of CV ABC in the GMP Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010.

The condition of building and sanitary facilities contributed to the aspects that not suitable to the regulations, including the lack of laboratory to control products quality. CV ABC still relies on external laboratory for quality measurement that, however, cannot be conducted daily. Measurements were done periodically every few months. Food companies should have their own laboratory for the purpose of controlling the quality and safety of raw materials, intermediate products if any, and final products. Laboratories play crucial role in ensuring food safety and quality through foods and/or food products analyses for contamination and product quality and nutritive value assessment (Attrey, 2017). As the facility is essentially required to provide accurate and reliable information about the quality of food products, it helps proving that the products produced are safe with adequate quality.

Analysis of Fishbone Diagram

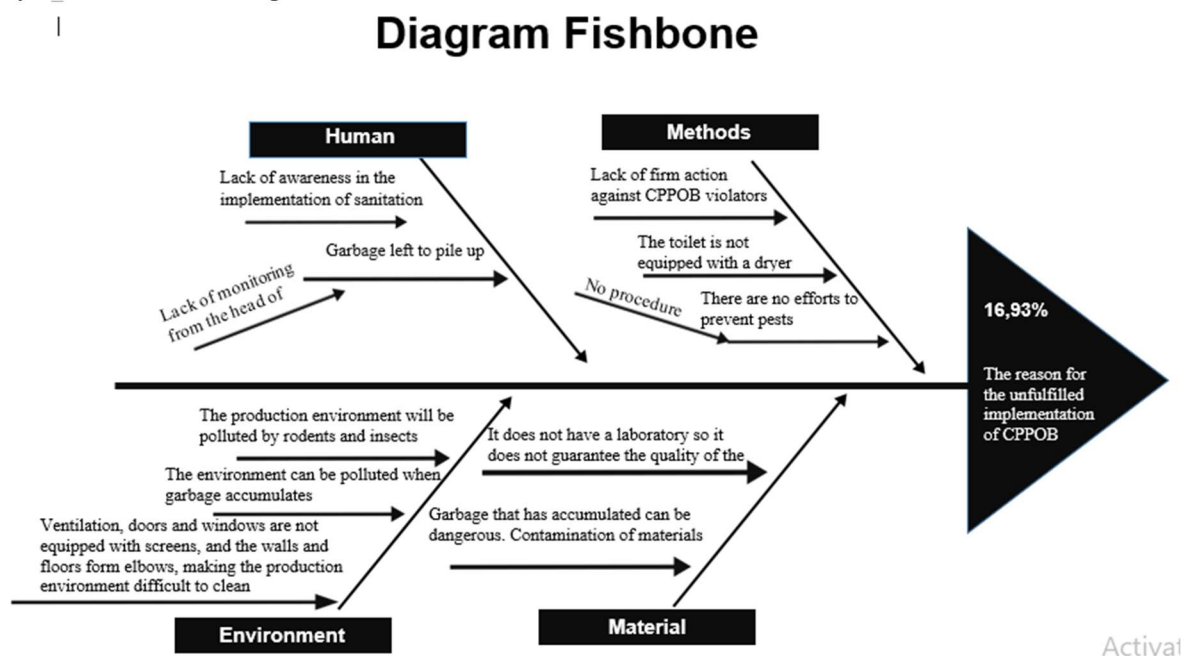


Figure 1. Fishbone diagram of problems in implementation of GMP

Based on analysis, approximately 16.93% of the requirements have not been implemented by CV ABC. The constraints or causes of the discrepancy was then further analyzed using fishbone diagram. According to Besterfield (2004), a cause-and-effect diagram or fishbone diagram combines lines and symbols that show a cause-and-effect relationship. Fishbone diagrams are a tool for locating many possible causes of an effect or problem and then using brainstorming to analyze the issue. The categories into which problems will be divided include people, materials, machines, procedures, policies, etc. Every category contains underlying factors that require explanation through a brainstorming session.

The results of the analysis can be seen in the image above. Based on the fishbone diagram, it can be seen that the cause of the non-compliance or non-fulfillment of the implementation of GMP comes from human factors, materials, environment, and methods, namely doors, ventilation, and windows that are not equipped with screens, do not have a laboratory, walls and floors form elbows so that the environment

production is challenging to clean, there is no pest prevention, lack of dryers or tissue and lack of firm action on GMP violators, lack of awareness in the implementation of sanitation, and there is still garbage that accumulates in the production room due to lack of monitoring from the head of the product which causes the environment to be polluted.

The results were comparable to previous studies on GMP implementation in several seafood-derived production sites in Indonesia, such as shredded fish in Makassar and fish cracker in East Java (Fuad, Iranawati, & Kartikaningsih, 2021; Latif, Dirpan, & Indriani, 2017). Either one, double, or multifactors of human, environment, methods, including equipments, and environment, including building and surroundings, waste management, and the presence of pest, were including the challenging aspect of GMP implementation in small and medium food enterprises in Indonesia. All were intertwined and close related as one aspect may influence the others. Company management should put more effort on how to improve GMP implementations in order to both improve their products as well as to prevent harm on their consumer.

CONCLUSION

The implementation of GMP (Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010) covers 18 aspects. In regulation number 75/M-IND/PER/7/2010, there are 86 conformities with a percentage of 83.07% and 14 non-conformities with 16.93% non-conformance. Constraints or causes that hinder the implementation of GMP (Regulation of the Minister of Industry of the Republic of Indonesia No. 75/M-IND/PER/7/2010) at CV ABC are due to human factors, materials, environment, and methods, namely doors, ventilation, and windows are not equipped with screens, not has a laboratory, walls and floors form elbows so that the production environment is challenging to clean, there is no pest prevention, lack of dryers or tissue and lack of firm action on GMP violators, lack of awareness in implementing sanitation, and there is still garbage that accumulates in the production room due to lack of supervision from the head of the product which causes the environment to be polluted.

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