Evaluation of Incompliance Criteria CPPB-IRT in Chocolate Processed (Company X)

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Abstract

MSMEs (Micro, Small, and Medium Enterprises) have proven to survive and restore the economy in Indonesia. However, in practice, there are still several obstacles, one of which is standardization. Standardization is essential for business actors because it serves as a benchmark for the readiness of the MSMEs to compete and meet market demands, both domestic and foreign. MSMEs Chocolate X, which is engaged in chocolate processing, in this case still faces various obstacles and needs proper handling so that it is ready to become a local product on an international scale. This research method uses descriptive methods, including observation, interviews, and documentation of all activities related to the production process. The results showed that there were several deviations found in MSMEs Chocolate X, including (1) maintenance and cleanliness of ventilation, doors, and windows, (2) the presence of a person in charge of employee health and hygiene, (3) the presence of a person in charge who has a food safety instructor certificate, (4) routine internal supervision and corrective actions within the company, (5) updating production documents, easy to store (at least 2x shelf life of food products) and easy to find, (6) food safety training program for employees. The status of the implementation of CPPB in MSMEs Chocolate X has a grade of D (deficient) with a rating of IV.

***Keywords**: Standardization, MSMEs, CPPB, Chocolate Processing.*

A. INTRODUCTION

During the 1997 economic crisis, the state of the Indonesian economy experienced a slump which was marked by the collapse of several large companies, so that layoffs were unavoidable (Grimm, Hofstetter & Sarkis, 2014). The crisis caused the rupiah exchange rate against the dollar to drop drastically. Creditors confiscated several large companies because they were no longer able to pay their maturing debts. As a result, the number of unemployed increased significantly (Wolf, 2014). In recorded history, the problems faced by Indonesia during the economic crisis, Micro, Small, and Medium Enterprises (MSMEs) have proven to survive and become saviors for economic recovery in Indonesia (Adesaya, Yang, Iqdara & Yang, 2020). Darmono (2006) revealed that MSMEs became an economic force that saved the Indonesian economy during the crisis and managed to maintain the pace of economic activity,

which was almost paralyzed due to the inability of large corporations to maintain their economic activities. Since then, MSMEs have become known and increasingly in demand. So that every year the number of MSMEs grows increases (Cetharikul, Ohulkerd, Jichuen, Sacks & Tangcharoenstein, 2019). However, conditions in the field, MSMEs face various problems such as difficulty in accessing capital, managerial and market capabilities that are still low, limited technology and information, issues with the low quality of human resources for MSME actors, business climate problems that are not entirely in favor of MSMEs, competition in the global market, and bureaucracy that tends to complicate administrative matters, less than optimal function of MSME empowerment institutions, lack of capital and capacity building, low quality of human resources. Second, limited access to capital. In fact, MSMEs have enormous potential (Vesce, Olivieri, Pairotti, Romani & Beltramo, 2016).

To answer the problems faced by MSMEs, there are several programs of empowerment activities that can be carried out, such as improving access to capital, technology, information, and markets and developing the potential of local resources. In addition, to promote various MSME-scale products, it is necessary to increase competitiveness through multiple processes and systems, one of which is developing and standardization of MSME processed agricultural products (Kanders, Lavin, Kowalchuk, Greenberg & Blackburn, 1988).

Therefore, the writing of this journal is to provide standardization following the procedures for Good Food Production Methods (CPPB).

Article 1 number 22 of the PP on Food Safety, Quality and Nutrition explain that: "Standards are standardized technical specifications or requirements, including procedures and methods that are compiled based on the consensus of all parties concerned with regard to safety, security, health, environment, the development of science and technology, as well as the experience of present and future developments to obtain the maximum benefit."

Quality standardization is a technical specification about the quality of a commodity or product that can be used for the public, utilizing cooperation and consensus of interested parties based on consultations on science, technology, and experience (Kadarisman 1995: 6). Meanwhile, product quality certification is a written statement from a competent and authorized institution containing the truth of quality, facts of inspection results, or test results based on a valid method. That certification includes a statement whose truth is borne by the institution that issued the certification.

National quality standardization is standardization made by the central government and implemented sectorally or by departments. Food products that carry out national quality standardization are the Ministry of Agriculture, Ministry of Industry and Trade, and BPOM, coordinated by the National Standardization Agency.

Scope of food quality standardization is as follows (Soekarto, 1990: 27): 1) Name of a raw product; 2) Quality classification must be supported by criteria and terms that are clear and described; 3) Guarantee of biological (biological), chemical, physical, and halal safety; 4) Sampling method for testing quality attributes; 5) Test or analysis method; 6) Materials and packing methods; 7) Labels.

The determination of non-compliance with the CPPB-IRT criteria is grouped into four, including: 1) Minor non-conformities are deviations that have the potential to affect the quality of food products; 2) Major non-conformities are deviations that have the potential to affect the efficiency of food product safety control; 3) Serious Non-compliance is a deviation that has the potential to affect the safety of food products; 4) Critical non-compliance is a deviation that will directly affect the safety of food products/or is a requirement that must be met (Arvanitoyannis & Savelides, 2007).

From the determination of the non-conformance criteria, it is possible to recapitulate the number of deviations from the CPPB-IRT standards for each non-conformity criterion and identify the level of IRTP that corresponds to the number of variations in each non-conformity criterion. IRTP level criteria can be seen in table 1.

Table 1 Criteria for Level of Non-compliance with CPPB-IRT

IRTP Level	Number of Deviations			
	Minor	Mayor	Seriously	Critical
Level I	1	1	0	0
Level II	1	2-3	0	0
Level III	NA*	≥4	1-4	0
Level IV	NA*	NA*	≥5	≥1

NA*: Irrelevant

B. METHOD

This research was conducted at the Makalate Chocolate production site, located at Jalan Kelapa 3 No 40, Makassar City. This research method uses descriptive qualitative research methods. Qualitative descriptive research means research methods that go through a case study approach with data sampling techniques based on specific considerations (purposive sampling) (Sugiyono, 2017).

This research was conducted through observation, interviews, and documentation of all matters relating to the production process activities. The reference for assessing the status of the implementation of CPPB-IRT used is based on the Minister of Industry of the Republic of Indonesia No. 75/M-Ind/Per/7/2010 and KBPOM Regulation No. HK 03.1.23.04.12.22007 In 2012, as shown in Table 1. Interviews were conducted in October 2020. Data processing aims to obtain quantitative values from the benefits of the standard application in each business function within the

company. This is done by assessing the extent of the readiness of the MSMEs in implementing the standards.

C. RESULT AND DISCUSSION

The application of product standardization on MSME products, mainly processed chocolate, aims to produce quality and competitive products in the global market (Prokopets, 2014). The application of standardization is still found to be unprepared for SMEs in implementing standardization in their business fields (Lemmeileur, N'Dao & Ruf, 2015). The unpreparedness is related to the role of the government, which has not been optimal in conducting guidance and development of MSMEs.

MSME Chocolate X Processed Chocolate Production

UKM Chocolate X is one type of chocolate processing business that is engaged in local food production. The location of UKM is at Jalan Kelapa 3, Makassar City, which was established in 2008. The production capacity of various flavors of chocolate is 60-70 kg/day and a maximum of up to 90 kg/day, especially during the holiday season. There are seven permanent employees and ten casual employees. MSME Chocolate X has 30 items of product types and flavors and the addition of other ingredients such as sesame, green beans, and jam. The tools used in the production process are pretty simple and still small in scale.

Application of Good Food Production Methods (CPPB) in MSME Chocolate X

The stages of the chocolate bar production process at MSME Cokelat X include (1) preparation of cocoa paste (liquor), (2) mixing (3) chocolate paste, (4) printing, (5) conching, and tempering, (6) packaging.

According to Susianawati (2006), 8 CPPB keys must be applied by industry. Following the results of observations at the research site (MSME Cokelat X), the following is the implementation of CPPB based on 8 CPPB keys.

Water Safety

The water used in UKM Cokelat X comes from the Drinking Water Company (PAM), the water is channeled through pipes/hoses, and then the water is stored in water reservoirs. This water reservoir has settled to be used cleanly and is available in sufficient quantities for chocolate production activities (Zomer, Owen, Magliano, Liew & Reid, 2012).

This is following Winarno's (2004) opinion, which states that the water used in processing must be treated first to suppress the number of microbes as low as possible; treated water is water that has undergone chemical and physical treatment.

Condition of Cleanliness of Surfaces in Contact with Foodstuffs

The importance of the cleanliness of every surface of the tool in direct contact with food raw materials guarantees that the CPPB requirements are met. At MSME Chocolate X, the equipment and containers used are in reasonably clean condition. Equipment is always cleaned using soap and then air-dried, both before and after the activity. It aims to reduce the occurrence of contamination of the product (Meehan & Richardsm 2006).

According to the Directorate of Farming Business Development and Product Processing (1998) in Susianawati (2006), all equipment in direct contact with the product must be washed with the correct washing technique and use sanitizer.
Employees who work in the processing room use gloves, masks, head coverings, and clean work clothes (Golob, Micovic, Bertoncelj & Jamnik, 2004). This also follows Ircham & Eko's (2007) opinion, which states that people who are doing work in the processing room should use masks (cover their nose and mouth), cover their heads, and keep clean clothes.

Cross-Contamination Prevention

Things that need to be considered in preventing cross-contamination include employee actions to avoid cross-contamination, separation of materials from ready-to-eat products, and the design of facilities and infrastructure from preventing cross-contamination (Kraak & Sacks, 2019).
The production room at MSME Chocolate X has an inefficient layout. The floor is easy to clean, not slippery, and the construction is solid and sturdy but not coated with waterproof material (Yan, Pinto, Cogan & Kovac, 2021). The walls are concrete, level, easy to clean, and brightly colored, but not waterproof. The ceiling is flat, level, solid, and brightly colored, but there is dust and cracks in the ceiling. Doesn't have proper ventilation. The lighting is not enough to reach the corner of the room. The final product storage area is not clean and tidy. Sanitation is not well organized because the production room is still in the same area as the sanitation room.

Hand Washing, Sanitation, and Toilet Facilities

Maintaining handwashing, sanitation, and toilet facilities is an important thing that must be considered so that there is no contamination of pathogenic bacteria that can affect the safety of food ingredients. Therefore, every worker or employee who carries out the processing must ensure that his hands are always clean.

The condition of handwashing, sanitation, and toilet facilities at MSME Chocolate X is well maintained, seen from the shape of hand sanitizing materials that are always available even though they do not meet the requirements. Each employee has a container to wash their hands so that every time they start and finish the processing process, the employees will wash their hands.

Protection from Contaminants

Protecting food product materials, packaging materials, and direct contact surfaces with food from microbial, chemical, and physical contamination are among the elements that must be protected from contaminants.
Based on observations at MSME Chocolate X, protection activities have not been carried out optimally. This can be seen from the absence of a regular monitoring schedule before carrying out the production process. In addition, the ventilation conditions in the production room are not up to standard, so that external materials such as dust and small insects can still enter and can cause product contamination.

Labeling and Storage

Packaging used for food products must provide a label containing information on raw materials, nutritional content, expiration date, and the name or address of the producer. Material storage must be considered, especially food grade and non-food grade materials. The labeling of chocolate bars at MSME Chocolate X has been carried out quite well. Still, it is not optimal because it does not include complete addresses of MSMEs and information on health claims and nutritional claims.

Then the packaging is also quite good, where the packaging material used is aluminum foil. According to Tony (2001) in Marwati (2019), chocolate products can absorb odors easily, so aluminum foil packaging is needed. Chocolate products are wrapped in aluminum foil so that they do not absorb dyes, flavors, or fragrances from the carton or the environment and maintain flavor stability. According to Wicaksono (2017) in Marwati (2019), the use of aluminum foil is intended to prevent oily brown fat from moving from inside the packaging and then leaking out.

Monitoring of Personnel Health Conditions That May Result In Contamination

The health conditions of employees who work must always be considered; it is not allowed if any employees who carry out the processing have signs of illness or injuries that can be a source of contamination.
Every employee must always use clean and hygienic work equipment, such as work clothes, headgear, masks, and gloves. This is done to maintain cleanliness by paying attention to sanitation and hygiene aspects.

Removing Pests From Processing Units

The condition of the raw material storage area, processing site, and product storage area must be guaranteed to be free from pests that can indirectly contaminate food. Some problems that can degrade and may carry disease include flies, cockroaches, rodents such as rats and birds.

Based on the explanation of the Central Java Provincial Fisheries and Marine Service (2006), in Susianawati (2006), the room floor must be maintained and free from

dirt/garbage and other conditions that can attract insects. Outdoor doors must be closed, and no pets are allowed in the vicinity of the processing room/site.

This study shows that the implementation of CPPB MSME Chocolate X is D (not good) with a rating of IV because some deviations occur at the processing location. The results of this identification are MSME Chocolate X meets 28 elements of non-conformity with the CPPB-IRT criteria from 36 aspects of non-conformity. Further explanation can be seen in the attachment. In addition, based on the non-conformance assessment of the CPPB-IRT criteria based on the regulation of the head of BPOM RI POM HK.03.1.23.04.12.2207 concerning Procedures for Inspection of Home Industry Food Production, it was obtained:

1. Number of CRITICAL nonconformities: 0
2. Number of SERIOUS nonconformities: 6
3. Number of MAJOR nonconformities: 11
4. Number of MINOR nonconformities: 11

From these results, it can be concluded that MSME Chocolate X is at IRTP level 4 because it has several severe non-conformities of more than four elements, where this level is the highest level of non-compliance, so it is essential to make improvements to some aspects that are not appropriate.

According to the results of the non-conformance assessment of CPPB-IRT MSME Cokelat X, the elements that must receive priority for improvement are six parts that enter the criteria for serious non-conformance. Serious deviations are deviations that, if no corrective action is taken, can affect food safety (Masrifah et al., 2015).

CPPB in chocolate bar processing is very important to produce good quality chocolate products, guaranteed safety, and following consumer expectations. Thus the stages of improvement of the deviations that occur become the main thing in the improvement process in the future.

This study provides several implications for the improvement of the serious deviations found. From the problems encountered according to the non-conformance assessment of CPPB-IRT, several improvements can be proposed, including: (1) It is recommended that the company and employees participate in activities/training related to increasing knowledge for prevention of contaminants, (2) The company must have a special officer who has a certificate as the person in charge of supervising health, hygiene, and food safety, as well as making regular internal corrections to the company, (3) The company must have a Standard Operating Procedure/work order that must be followed in carrying out a particular job guided by the objectives to be achieved and an effective monitoring system in the form of recorded documents.

D. CONCLUSION

From the results of research on Chocolate X SMEs that have been carried out, it can be concluded that the current conditions for applying the CPPB-IRT criteria to Chocolate X SMEs are still at level 4 (four). The assessment is based on the number of severe non-conformities as many as six elements, including (1) ventilation, doors and windows are always maintained and clean, (2) there is a person in charge of employee health and hygiene, (3) has a person in charge who has a food safety instructor certificate, (4) carry out internal supervision and corrective actions within the company regularly, (5) production documents are continuously updated, easy to store (at least 2x the shelf life of food products) and easy to find, (6) have food safety training programs for employees.

Based on the results of the CPPB-IRT assessment above, several improvements can be proposed, including 1) The factory conducts training for employees so that employees can know and apply the results of the movement to prevent and minimize contamination of processed products, (2) The company must have a person in charge of product supervision that has a certificate of food safety instructor and employee hygiene and health supervision, (3) the company must have a Standard Operating Procedure/work order that must be followed in carrying out a specific job based on the objectives to be achieved and has an effective supervision system in the form of documents that recorded.

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