

# Improvement of Production Process Using CPPB-IRT and WISE Standards in the Tofu Industry: A Case Study

Bambang Suhardi<sup>1\*</sup>, Dina Nurfitri Rahma<sup>2</sup>, Irwan Iftadi<sup>3</sup>

<sup>1,2,3</sup> *Department of Industrial Engineering, Universitas Sebelas Maret Surakarta, Jln. Ir. Sutami 36 A, Surakarta, West Java 57126 Indonesia.*

**ABSTRACT:** Tofu is one of the most consumed foods because of its delicious taste, low price and high protein content. The tofu industry in Indonesia has experienced a relatively rapid increase both on a small, medium and large scale. However, the production process is still carried out traditionally involving many tools and materials and is feared to cause food contamination that can endanger health. The quality of a product can be maintained if the manufacturer has a system that ensures the product meets the standards set. In addition, every food industry is required to have a Home Industry Food Production Certificate (SPP-IRT). To obtain SPP-IRT, several aspects are assessed by the CPPB standard regulated by BPOM. This study aims to evaluate the implementation of CPPB-IRT using the CPPB-WISE standard and provide suggestions for improvement. The results showed there are 14 CPPB-WISE criteria, and the suitability of the implementation of CPPB-WISE in the Tofu industry was 58%. Shows the need for improvement in the production process to comply with the established standards. Priority improvements are carried out using the brainstorming method to obtain improvement priorities on four criteria: storage, employee health and hygiene, equipment cleanliness and production area. Improvements include implementing a 5S work culture, poster making and preparing Standard Operating Procedures (SOP). Evaluation and proposed improvements can help the Tofu industry improve the production process and working conditions.

**Keywords:** Tofu, CPPB-IRT, WISE, Brainstorming, 5S

---

## 1. INTRODUCTION

Tofu is one of the most popular foods because of its delicious taste, low price and high nutritional content [1]. Tofu is made from soybeans with high protein content and digestibility [2]. However, tofu is a perishable food that cannot last long, i.e., 1-2 days at room temperature. In addition, the processing is carried out simply by involving many tools and materials. So it is feared that it will cause biological, chemical and other pollution that can interfere, harm and endanger health so that it is safe for public consumption [3]. The tofu industry in Indonesia has experienced a relatively rapid increase both on a small and medium scale. The product quality can be maintained if the manufacturer has a system that can protect the product. Every food industry is required to have a Home Industry Food Production Certificate (SPP-IRT). To get the SPP-IRT, several aspects must be assessed, including the location and production environment, buildings and facilities, production equipment, sanitation, employees, etc., as stated in the regulations issued by BPOM [4].

Based on the results of observations in one of the tofu industries in Solok City, it is known that there are still

aspects that are not by the CPPB-IRT standard. The aspects of the building can be seen, such as slippery floors due to processed tofu juice, dirty and dusty walls, ventilation and ceilings. In addition, the cleanliness and storage of equipment used for the production process are not too much attention. Can cause contaminants to enter the food. Another condition is that the employee's habit of smoking and drinking while working and not wearing personal protective equipment can have an effect, such as the fall of cigarette smoke or sweat on processed food.

The results of the explanation above indicate that the production process in Tofu Industry needs to be improved using the CPPB and WISE standards issued by the International Labor Organization (ILO). CPPB is one of the crucial factors that contains procedures for producing good food. Through the implementation of CPPB, the food industry is expected to produce quality food suitable for consumption and safe for health. Meanwhile, WISE will support meeting CPPB standards to improve working conditions. The combination of the CPPB and WISE standards is used to increase productivity and maintain safe, healthy, and comfortable working conditions. So that it can increase consumers and the food industry concerned can proliferate [5]. Several previous studies supported this research by [6], discussing the application of CPPB to IRT crackers sala to obtain SPP-IRT to enter the retail market. The preparation of the CPPB-WISE checklist resulted in 5 criteria that became priority improvements. Then the priority is selected using the AHP method. The main criteria that become a priority for improvement are the storage and handling of materials and equipment. Other research was also carried out by [7] in the application of CPPB-IRT in Tempe Chips "Cak Mul" Singosari Branch analyzing initial conditions and offering improvements and food safety. Another study was conducted by [8] using the WISE method on MSME printing. The results obtained are four priority improvements based on focus group discussions (FGD) to improve working conditions to be more productive. Furthermore, research by [9] discusses the implementation of CPPB-IRT and Halal Certification combined with a GHMP checklist to determine non-compliant requirements and provide recommendations for improvement at the tofu industry.

## 2. RESEARCH METHODS

This research begins with conducting field studies through interviews and observations as well as literature studies to identify problems that occur in the tofu industry. Based on the identification of the situation that has been done, it is then used to formulate the problem formulation and problem objectives. The next stage is the stage of data collection and processing. This study aims to evaluate the discrepancy in the conditions of the tofu industry through the CPPB and WISE checklists and provide suggestions for improving the production process..

Good Manufacturing Practices (CPPB) is a guideline used with the aim that producers can meet the requirements that have been determined to produce food produce quality products by consumer demands [10]. The CPPB criteria cover 14 aspects, including the production environment, buildings and facilities, production equipment, water supply, hygiene, and sanitation facilities and activities, pest control, employee health and hygiene, process control, food labeling, storage, the person in charge, product recall, record keeping, and documentation, and employee training [11]

WISE is an approach that focuses on low-cost interventions that can improve labor productivity and working conditions at the same time [12]. WISE has eight criteria that must be met: material storage and handling, workplace design, productive machine safety, physical environment, electrical hazard protection, fire prevention, and welfare.

CPPB-WISE list is compiled based on criteria and sub-criteria which have the same meaning in CPPB and WISE to reduce the occurrence of document redundancy. After the two checklists have been collected, the next step is to evaluate the two checklists. According to research [12], the assessment is carried out by giving a score range of 1-5 by comparing the application of the standard with the initial conditions. The following is the determination of the weight of the score:

- a. Score 1 : If the IRTP does not carry out these activities or requirements.
- b. Score 2 : If the IRTP understands the activity as a reasonable requirement but does not/hasn't done it, or other conditions have not been met.
- c. Score 3 : If the IRTP performs these activities inconsistently (not consistently/sometimes).

- d. Score 4 : If the IRTP performs these activities, but it is not perfect or maximal.
- e. Score 5 : If the IRTP performs these activities well.

Furthermore, an indicator assessment is carried out aimed at seeing how big the gap is in the company. The percentage range of the sum of the weighted scores is determined as follows.

- a 1-49% : The CPPB-WISE standard in IRTP is in dire need of improvement because it differs significantly from the existing standard requirements.
- b 50-74% : The CPPB-WISE standard in IRTP still has to be improved to meet the existing requirements and must increase the effectiveness of the implementation of the CPPB-WISE program.
- c 75-100%: The CPPB-WISE program at IRTP has met the requirements of existing standards well.

Next, a brainstorming activity or discussion with the owner and supervisor of the tofu industry was carried out. Before the discussion, compiled the discussion points based on the results of the previous assessment to facilitate the discussion process. The output of the discussion process is the selection of criteria that become a priority for improvement. The research ends with the stage of preparing improvement alternatives based on the results of the choice of improvement priorities.

### 3. RESULTS AND DISCUSSION

The results obtained from the study show analysis results which include checking the CPPB-WISE checklist, which consists of the preparation and evaluation of the CPPB-WISE list, selection of improvement priorities based on the results of brainstorming, and proposals for improving the production process in the tofu industry.

#### 3.1. CPPB-WISE Checklist

The preparation of the CPPB-WISE checklist is carried out by combining some of the same aspects of the CPPB and WISE checklists into a unified CPPB-WISE checklist. The merging of the CPPB-WISE list is carried out using a semantic (meaning) and synonymous (same word) approach. The preparation of the CPPB and WISE schemacan be seen in Figure 1.

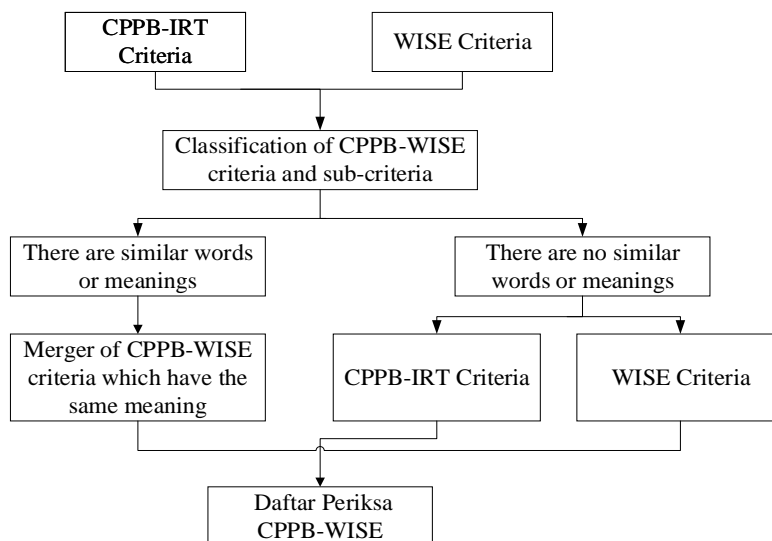


Figure 1. CPPB-WISE Schema

The merger is based on a literature review of research on the integration of HAS and GMP [13], as well as the implementation of CPPB-IRT and Halal Certification [9]. The purpose of integrating these two systems is to assist home industries in implementing the two systems directly simultaneously and reduce document redundancy and streamline the interaction of all systems involved.

The following in **Table 1** is a combination of the two checklists

**Table 1.** CPPB-WISE Checklist

No	CPPB-IRT	WISE
1	Location and Production Environment	Criterion IV. Physical Environment
2	IRTP Buildings and Facilities	Criterion IV. Physical Environment
3	Machine And Equipment Safety	Criterion III. Productive Machine Safety, Criterion V. Electrical Hazard Protection, Criterion VI. Fire Hazard Management
4	Water Supply	
5	Facilities and Hygiene and Sanitation Activities	Criterion VII. Welfare Facilities
6	Employee Health and Hygiene	Criterion VII. Welfare Facilities and Criteria VIII. Job Organization
7	Maintenance and Hygiene and Sanitation Program	Criterion III. Productive Machine Safety
8	Storage	Criterion I. Storage and Handling of Materials. Criterion II. Workplace design
9	Process Control	
10	Food Labeling	
11	Supervision and Responsibility	
12	Product Withdrawals	
13	Recording and Documentation	
14	Employee Training	Criterion VIII. Job Organization

### 3.2. CPPB-WISE Identification

Based on the results of the identification of the discrepancy between the conditions in the tofu industry with 14 CPPB-WISE criteria, 11 criteria were found that still needed improvement, while the other three criteria

were by the established standards. The suitability of the condition in the tofu industry with the CPPB-WISE standard is 58%. It shows that the implementation of the CPPB-WISE standard still has to be improved and its effectiveness increased to meet the existing requirements.

**Table 2.** Gap Analysis of CPPB-WISE

Criteria	Score	Ideal Score	%
Location and Environment	12	20	60%
IRTP Buildings and Facilities	72	135	51%
Machine and Equipment Safety	31	50	62%
Water Supply	4	5	80%
Welfare Facilities and Hygiene and Sanitation Activities	39	75	52%
Employee Health and Hygiene	27	50	54%
Maintenance and Hygiene and Sanitation Program	40	85	47%
Storage	22	55	40%
Process Control	79	125	63%
Food Labeling	2	5	40%
Supervision and Responsibility	20	25	80%
Product Withdrawals	23	30	77%
Recording and Documentation	9	15	60%
Employee Training	8	20	40%
<b>Total Number</b>	388	695	
<b>Average Percentage</b>			<b>58%</b>

Based on the result of the standard evaluation of CPPB-WISE in Table. 2, it can be seen that there are 14 CPPB-WISE criteria with different percentages of each. Three criteria, namely water supply or facilities, supervision and responsibility, and product withdrawal. At the same time, the 11 criteria that do not fit will be studied more deeply.

### 3.3. Determine Improvement Priorities

Eleven criteria that are not following the standards set will be investigated more deeply. So that for the next stage, brainstorming activities or discussions with owners and employees are carried out to determine which criteria will be selected and considered necessary for improvement according to the needs and conditions of the current tofu industry. Each criterion has 14 sub-criteria taken from a weighted score of 1-3, which have the direct potential for food safety. In contrast, elements that have a weighted score of 4 have low-level gaps so that they do not have a direct influence on product safety. The following are the discussion points for brainstorming.

**Table 3. Brainsorming Points**

No	Criteria	Sub Criteria
1	Production Location and Environment	Trash cans must be closed, separated from various types of waste and not allowed to accumulate
2	Production Buildings and Facilities	Aspects of the building are always clean from dust, mucus and other impurities and brightly coloured
3		Doors, windows and ventilation screens are equipped to prevent the entry of insects.
4	Machine and Equipment Safety	Aspects of the building are always clean from dust, mucus and other impurities and brightly coloured
5		Provide a number of fire extinguishers in the workplace.
6	Welfare Facilities and Hygiene and Sanitation Activities	Hand washing facilities are available near the production room equipped with cleaning soap and dryers.
7		Toilets/restrooms are well constructed, closed and marked with warnings.
8	Employee Health and Hygiene	Employees who handle food should wear clean work clothes equipped with personal protective equipment.
9		Employees are not allowed to smoke, spit, sneeze or cough towards processed food.
		Employees are not allowed to wear jewellery.
10	Pest Control	The environment and production aspects must be adequately maintained to avoid

		pests.
11	Storage	Storage of materials and food products is carried out in a particular place, not touching the floor.
		The final product is stored in a clean place.
<b>No</b>	<b>Criteria</b>	<b>Sub Criteria</b>
11	Storage	Machine/equipment storage must be clean and in good condition.
		Cleaning tools are stored and cared for properly.
12	Proses Control Labeling	Packaging design and materials should protect the product.
13	Labeling	The labelling contains product identification.
14	Employee Training	The owner applies and teaches CPPB counselling to employees.
		Establish OHS policy

Improvements that will be made soon and in the future based on the results of the mutual agreement. The discussion process in this study was carried out by considering the 5W+1H factor.

- Why : Why are these criteria proposed for improvement?
- What: What improvement plan will be made to these criteria?
- Where : Where is the appropriate location for the implementation of the repairs to be carried out?
- When : When is the estimated time to repair?
- Who : Who is responsible for the implementation of these improvements?
- How : How to fix the problem?

Alternative solutions were discussed again to produce solutions that are possible to be applied by the tofu industry. The discussion found that the tofu industry was very aware and acknowledged that some of these discrepancies did occur in their environment.

Based on the results of the brainstorming, there are four criteria selected to be a priority for improvement soon. At the same time, the other ten sub-criteria were carried out in the future because they needed to consider high costs, more resources and complex planning.

**Table 4.** Improvement

No	Sub-Criteria	Improvement
1	Machine/equipment storage must be clean and in good condition.	Organize the storage of materials and equipment using 5S
	Cleaning tools are stored and cared for properly.	
2	Employees who handle food should wear clean work clothes equipped	Making posters as a sign of warning and prohibition of

	with personal protective equipment. Employees are not allowed to smoke, spit, sneeze or cough towards processed food and wear jewellery.	employee habits
3	Aspects of the building are always clean from dust, mucus and other impurities and brightly coloured.	Making Standard Operating Procedure (SOP)
4	Production equipment should be maintained, inspected and always in a clean condition.	

### 3.4. Implementation of Improvements

#### 1. Implementation of 5S on Storage

Improvements in the storage aspect consist of two types, namely the storage of raw materials and equipment. The implementation of improvements to the storage aspect is by implementing a 5S work culture (Seiri, Seiton, Seiso, Seiketsu, Shitsuke). The purpose of using 5S is to facilitate the arrangement of a good work area (good housekeeping) to create a comfortable environment, eliminate waste and improve effective and efficient work culture. The following are the steps for implementing the 5S program in the storage aspect.

**Table 4.** Implementation of 5S

Step	Implementation
<i>Seiri</i>	List the goods in the production area based on the frequency of their use. At this stage, identification of goods by giving red tags. The red tag function is an identification card for the items being evaluated and set aside, which includes a policy of steps to be taken. (Figure.2)
<i>Seiton</i>	Storage of raw materials that are still in the production room are moved to their storage area (Figure.3)
	The tofu/milled soybean storage box still mixed with other items was moved to its own place and neatly arranged. In addition, there are unused pans in the workspace, then moved to the kitchen area. (Figure 4)
<i>Seiso</i>	Implement daily cleaning procedures for equipment. (Figure 5)
<i>Seiketsu</i>	Maintain the state of the work area to keep it clean and tidy by making 5S posters to support and remind



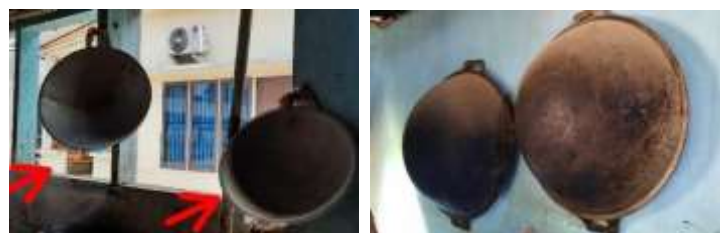
	employees to apply the previous 3S principles continuously and consistently.
<i>Shitsuke</i>	Evaluation of cleanliness and tidiness during the production process and giving rewards as well as reprimands so that employee discipline is increased and is more enthusiastic at work



**Figure 2.**Implementatio Red-tag



**Figure 3.**Implementation of Seiton on raw materials (before and after conditions)



**Figure 4.**Implementation of Seiton on equipment (before and after conditions)



**Figure 5.**Implementation of Seiso on equipment (before and after conditions)

2. Making poster/displays

Employee health and hygiene is one of the essential aspects of maintaining food safety. One way to maintain food safety is by wearing personal protective equipment and staying away from prohibitions that can trigger the emergence of danger. The problem in the tofu industry is that employees often interact with food ingredients and the production process, but most of them still do not use personal protective equipment. In addition, the habit of employees smoking, eating, and drinking in the production room is due to the common knowledge of workers about the importance of food safety. So, it is necessary to make a sign to remind employees. The following in Table 6 is the poster design stage.

**Table 6.** Poster design stage

No	Steps	Result
1	Conduct an assessment of the condition of the work area	In the tofu industry there is no safety sign in the work area.
2	Make the right choice of signs	The selection of signs in the display design is based on the OSHA/AZNI Z535.1 decision matrix. The signs used are:NOTICE using a blue background use of personal protective equipment and signs. WARNING by using an orange background as a sign prohibiting habits such as smoking, eating, drinking, and wearing jewelry.
3	Location selection	Placement according to OSHA/ANSI Z535 at a height of 115-167 cm above the floor
4	Material Selection	Use vinyl sticker paper



**Figure 6.** PPE Posters



Figure 7. Habit Prohibition Poster

### 3. Standard Operating Procedure

Standard Operating Procedure (SOP) is a written agreement that contains rules, policies, and technical specifications that must carry out consistently to guarantee processes, products, and services. The purpose of making SOPs is so that employees can maintain consistency in carrying out work procedures. In making SOPs for cleaning the work area, the Simple Steps format is used. [14]. The following in Figure 7 is an example of a proposed SOP.

STANDARD OPERATING PROCEDURE (SOP)		No. Doc	01/01
Tofu Industry		Effective	Mai 2022
Solok City, Sumatera Barat		No Rev/Date	00
		Page	1/1
<b>PRODUCTION EQUIPMENT CLEANING</b>			
<p><b>1. Goals</b> The purpose of this Standard Operating Procedure (SOP) is to serve as a guide and reference in the implementation of cleaning production equipment.</p> <p><b>2. Scope</b> This Standard Operating Procedure (SOP) is used in the scope of maintaining the cleanliness of the work area and production equipment at the CNG Tofu Factory.</p> <p><b>3. Referensi</b> Regulation of BPOM RI No.HK.03.1.23.04.12.2206 Year 2012 concerning CPPB IRT</p> <p><b>4. Equipment and materials</b> Equipment and materials supporting equipment used such as tools and cleaning chemicals (Eber brooms, gals brooms (long-stemmed), broomsticks, mops, floor brushes, rags or dusters, and cleaning soap</p> <p><b>5. Instruction</b> Instruct employees to be responsible for the cleanliness of production equipment</p> <p><b>6. Procedure</b></p> <ol style="list-style-type: none"> <li>1. Employees must clean all of the equipment after use to remove dirt immediately. How to clean the equipment:               <ol style="list-style-type: none"> <li>a) After each production, wet with water and clean the dirt using a brush or sponge/Bersihkan kotekan dengan cara disikat dengan larutan pembersih peralatan</li> <li>b) Clean dirt by brushing with an equipment cleaning solutio</li> <li>c) Rinse all equipment using hot water</li> <li>d) Dry using a cloth, store face down, and protect from dust/dirt or shelves</li> <li>e) Equipment is placed to make it easier for workers</li> <li>f) Every time before production, wipe all equipment using a clean cloth to avoid dust/dirt</li> <li>g) The weighing device is replaced every time it is no longer functioning</li> <li>h) Employees must immediately report any equipment that has been damaged (to be replaced immediately).</li> </ol> </li> <li>2. All equipment must be maintained, checked, and monitored to function properly and always in a clean condition.</li> </ol>			
PREAPARED		APPROVED	

Figure 8. Standard Operating Procedure

## 4. CONCLUSION

Based on the results of identifying the discrepancy between the conditions of the CNG Tofu Factory with 14 CPPB-WISE criteria, 11 criteria still needed improvement. At the same time, the other three followed the established standards. The suitability of the condition of the CNG Tofu Factory with the CPPB-WISE standard

Based on the results of brainstorming and analysis using 5W1H on 11 CPPB-WISE criteria consisting of 14 sub-criteria, it found that four criteria became priority improvements soon, namely storage, employee habits, building aspects, and machine and equipment safety. takes into account the factors of cost, time and human resources. The proposed improvement is the application of the 5S principle (Seiri, Seiton, Seiso, Seiketsu, Shitsuke) to the storage criteria. The second is making posters or warning signs. The third and fourth are creating SOPs for cleaning the area and work equipment following established guidelines. The evaluation and proposed improvements can help the Tofu Factory improve production process improvements and working conditions

## 5. REFERENCES

- [1] F. A. Nur, "Pengendalian Kontaminasi Logam Berat Di Industri Tahu Dengan Konsep Hazard Analysis Critical Control Point (Haccp) Heavy Metal Contamination Control In The Tofu Industry Based On Hazard Analysis Critical Control Point (Haccp) Concept," *Jurnal Teknik Lingkungan*, No. 17, Pp. 1-11, 2011.
- [2] D. Iswadi, "Modifikasi Pembuatan Tahu Dengan Penggunaan Lama Perendaman, Lama Penggilingan Dan Penggunaan Suhu Dalam Upaya Meningkatkan Kualitas Produk Tahu," *Jurnal Ilmiah Teknik Kimia*, Vol. 5, No. 1, Pp. 20-30, 2021.
- [3] F. Kutresnaningdian, "Peran Kesadaran Kesehatan Dan Perhatian Pada Keamanan Makanan Terhadap Sikap Dan Minat Konsumen Dalam Membeli Makanan Organik," *Jurnal Ilmu Manajemen*, Vol. 1, No. 1, 2012.
- [4] D. R. Darmasri, "Penerapan Good Manufacturing Practice dan Work Improvement In Small Enterprise pada Usaha Kecil dan Menengah Untuk Pemenuhan Standar Kesehatan (Studi Kasus : UKM Tempe Tenggilis Mejoyo Surabaya).," Institut Teknologi Sepuluh November, Surabaya, 2013.
- [5] S. B. Islami, "Analisis Penilaian Penerapan Kesehatan dan Keselamatan Kerja Pada Industri Kecil dan Menengah dengan Menggunakan Metode Wise," Institut Teknologi Sepuluh November, Surabaya, 2013.
- [6] B. Suhardi, M. Kadita Dan P. W. Laksono, "Perbaikan Proses Produksi Dengan Standar Cara Produksi Pangan Yang Baik (Cpbb) Dan Work Improvement In Small Enterprise (Wise) Pada Industri Kerupuk Sala," *Jurnal Simetris*, Vol. 9, No. 1, 2018.
- [7] Y. V. Damayanti, "Penyusunan Manual dan Implementasi Cara Produksi Pangan yang Baik Untuk Industri Rumah Tangga (CPPB-IRT) pada Industri Keripik Tempe "Cak Mul" Cabang," Universitas Brawijaya, Malang, 2021.
- [8] N. D. Sari, I. Iftadi Dan I. W. Suletra, "Evaluasi Kondisi Kerja Pada Umkm Percetakan Menggunakan Work Improvement In Small Enterprises (Wise)," *Jurnal Intech Teknik Industri Universitas Serang Raya*, Vol. 7, No. 1, Pp. 45-55, 2021.
- [9] Y. D. Putri, "Evaluasi Good Halal Manufacturing Practices (Studi Kasus: Pabrik Tahu)," Uin Suska Riau, Pekanbaru, 2019.
- [10] H. Thaheer, *Sistem Manajemen HACCP (Hazard Analysis Critical Control Points)*, Jakarta: Bumi Aksara, 2005.
- [11] Bpom, "Cara Produksi Pangan Yang Baik Untuk Industri Rumah Tangga," 2012.
- [12] B. Suhardi, S. Vidinia Wardani Dan W. Ahmad Jauhari, "Perbaikan Proses Produksi Ikm Xyz Berdasarkan Kriteria Cppb-Irt, Wise, Dan Sjh Lppom Mui," *Jurnal Teknik Industri*, Vol. 14, No. 2, 2019.
- [13] A. U. Afifah Dan D. Irianto, "Perancangan Standar Integrasi Sistem Jaminan Halal Dan Cara Pembuatan Obat Yang Baik," *Inaque : Journal Of Industrial And Quality Engineering*, Vol. 9, No. 1, Pp. 63-80, 2021.
- [14] LAN RI, *Pedoman Penyusunan Standar Operasional Prosedur Di Lingkungan Lembaga Administrasi Negara*, LAN RI, 2019.
- [15] BPOM RI, "Peraturan Kepala Badan Pengawas Obat dan Makanan (BPOM) Republik Indonesia Nomor HK. 03.1.23.04.12.2206 Tentang Cara Produksi Pangan Yang Baik (CPPB) Untuk IRTP," BPOM RI, Jakarta, 2012.

- [16] B. Suhardi, R. P. Sari Dan P. W. Laksono, "Perbaikan Proses Produksi Pada Ikm Tahu Sari Murni Mojosongo Menggunakan Metode Good Manufacturing Practice (Gmp) Dan Work Improvement In Small Enterwise (Wise)," *Jurnal Intech Teknik Industri Universitas Serang Raya*, Vol. Vol 6, No. No. 1, Pp. 88-98, 2020.
- [17] A. Bakhtiar, "Analisis Implementasi Sistem Manajemen Kualitas Iso 9001:2000 Dengan Menggunakan Gap Analysis Tools (Studi Kasus Di Pt Pln (Persero) Pikitring Jbn Bidang Perencanaan)," *J@Ti Undip*, Vol. Iv, No. 3, 2009.

## **INFO**

**Corresponding Author: Bambang Suhardi, Department of Industrial Engineering, Universitas Sebelas Maret Surakarta, Jln. Ir. Sutami 36 A, Surakarta, West Java 57126 Indonesia.**

**How to cite this article: Bambang Suhardi, Dina Nurfitri Rahma, Irwan Iftadi, Improvement of Production Process Using CPPB-IRT and WISE Standards in the Tofu Industry: A Case Study, Asian. Jour. Social. Scie. Mgmt. Tech.2022; 4(6): 11-23.**