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IMPLEMENTATION OF STANDARD OPERATING PROCEDURES OF SMK3 IN THE PROCESSED RICE INDUSTRY OF CV MITRA BERKAH IN PAROMPONG, WEST BANDUNG REGENCY.

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Abstract
Background. Currently, public knowledge, particularly regarding the Occupational Safety and Health Management System (SMK3), remains limited. In fact, if the understanding of SMK3 is good, the number of work accidents is getting less, work productivity is getting higher, and finally, the number of products produced is increasing, with the quality also getting better.
Purpose. The purpose of implementing the PKM program is to increase the understanding, knowledge, and insight of CV Mitra Berkah Parompong, West Bandung Regency, as an industry player about POB SMK3.
Method. In this program, location surveys, interviews before and after the seminar were conducted. The training and mentoring material is an explanation of SMK3, the application of SMK3 in instant rice processing.
Conclusion. After participating in this mentoring, it is hoped that they will gain a deeper understanding of the POB of SMK3 and apply it correctly and adequately in the community.

Keywords: POB, SMK3, Instant rice, small and medium industries

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INTRODUCTION

Small and medium industries are essential assets that support the economy in Indonesia, because they are large and able to support the generation of the country's foreign exchange. Occupational safety and health in small industries are a challenge because they receive less attention from workers and their owners. In Law Number 13 of 2003 concerning labor, Article 86 states that workers have the right to protection of occupational safety and health. The causative factor is the level of *Awareness* of workers and owners of occupational safety and health. In addition, knowledge about SMK3 causes workers to consider that accidents that occur in the workplace are unavoidable and caused by workers' negligence.

In addition to negligence, work accidents can also occur to workers due to the tools used not in accordance with safety standards (O'Toole, 2002). Efforts are made to reduce the rate of work accidents, namely the implementation of various regulations related to humans. According to Törner et al. (2008), Nordlöf et al. (2015), and Alli (2008), work accidents can also occur due to worker behavior that is not in accordance with applicable regulations.

Occupational safety and health continue to receive significant attention from various parties because they have an impact on both physical and financial aspects. One of the critical things that the ILO pays attention to for the informal sector of MSMEs in Indonesia is the training program through the PATRIS (Joint Action Training for Informal Sector Actors) handbook published in 2003 by the International Labour Office. For this reason, in order to raise awareness of MSMEs in occupational safety and health, it is necessary to carry out an introduction program of the Occupational Safety and Health Management System so that they can carry out activities correctly and adequately so that they can create a safe and comfortable working atmosphere (Regulation of the Minister of Manpower No.5 of 1996 concerning the Occupational Safety and Health Management System and Government Regulation No. 50 of 2012 concerning the Implementation of Occupational Safety and Health Management System). Efforts to create a safe, comfortable, and conducive working situation in the instant rice industry are to implement a manufacturing process in accordance with applicable regulations so that the processed products are hygienic (Hudori, 2017).

Instant rice is one of the practical food products with excellent prospects in Indonesia, serving as both an alternative to emergency food and a staple for daily consumption among urban communities. This product has strategic value because it can meet food needs in

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emergency conditions, such as natural disasters, while supporting a fast-paced modern lifestyle. According to Yadav et al. (2024), various methods have been developed to produce quality instant rice, ranging from **autoclave-retrogradation, extrusion, to freeze** drying. Rudini, Subandi, and Lukman (2023) investigated the process of making instant rice, specifically by comparing the soak-steam-dry method with the **freeze-drying method.** The result is that traditional methods are more straightforward and cheaper, and the quality and shelf life of the product are superior to freeze drying. Therefore, the selection of production methods needs to be adjusted to the capacity of MSMEs and the target market.

To ensure the consistent quality of instant rice, it is necessary to use a standard, namely POB SMK3. The objectives of the implementation of POB SMK3 are

1. Ensuring that the instant rice production process is carried out safely, hygienically, in accordance with quality and occupational safety standards.
2. Minimizing the risk of work accidents and work-related illnesses.
3. Maintaining product quality (organoleptic quality, microbiological safety) so that consumers receive healthy and consumption-worthy products.

CV Mitra Berkah Instant Rice Products

CV Mitra Berkah provides a variety of instant rice, such as Nasi Liwet Jambal, Nasi Liwet Teri, Nasi Kebuli Kambing, Nasi Kebuli Ayam, Nasi Kuning, Nasi Hainan, Nasi Briyani Basmati, and others (Figure 1).

Figure 1. CV Mitra Berkah Instant Rice Products

METHOD

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The method carried out in this activity is through several stages:

Direct observation

Direct observation, namely: The Abdimas team immediately came to the location of the service to obtain data. Observation is helpful in determining the conditions and needs of CV Mitra Berkah regarding the materials required for the training on the implementation of POB SMK3. Observation is crucial to realizing the success of community service activities themselves.

Counseling and Training POB SMK3

The Abdimas team provided assistance and training on understanding the implementation of POB SMK3 to CV Mitra Berkah. The POB material for SMK3 is as follows.

POB: Operation Rice Mill / Polisher

Objective: To ensure that the operation of the Rice Mill / Polisher is carried out safely and in accordance with the principles of SMK3.

Scope: All operators on duty in the relevant area.

PPE: Safety helmet, safety shoes, gloves, and mask (customized for use).

Before Surgery

Activities/Work Instructions	Potential Hazards	Hazard Control
Check the cleanliness of the area, make sure there is no rice splattered.	Slip	Clean the area, use anti-slip safety shoes.
Check the condition of the machine, make sure the cover/guard is installed.	Hand clamped machine	Make sure the engine guard is installed before starting on.
Use PPE: dust masks, gloves, safety shoes.	Dust exposure, injured hand	Complete PPE must be used.

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During Operation

Activities/Work Instructions	Potential Hazards	Hazard Control
Start the machine according to the instructions.	Vibrating/sudden movement machine	Do not stand too close to the moving parts.
Carefully add the rice, do not overdo it.	Rice dust, spills	Use a special mouthpiece, do not use direct hands.

After Surgery

Activities/Work Instructions	Potential Hazards	Hazard Control
Turn off the machine according to the SOP.	Residual energy in the engine	Wait for the machine to stop completely before cleaning.
Clean the area from dust/rice.	Slip	Use a vacuum or industrial broom.

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POB: Rice Washing
Objective: To ensure that the operation of the Rice Washing is carried out safely and in accordance with the principles of SMK3.
Scope: All operators on duty in the relevant area.
PPE: Safety helmet, safety shoes, gloves, and mask (customized for use).

Before Surgery

Activities/Work Instructions	Potential Hazards	Hazard Control
Prepare a sack of rice with a hand pallet.	Back injuries	Use correct manual handling techniques.
Prepare the washing area with an anti-slip mat.	Slip	Put on an anti-slip rubber band.

During Operation

Activities/Work Instructions	Potential Hazards	Hazard Control
Wash the rice according to the capacity of the container.	Contaminated water splashes	Use rubber gloves & a waterproof apron.
Lift the container in pairs when it weighs > 25 kg.	Back muscle injury	Use team lift techniques.

After Surgery

Activities/Work Instructions	Potential Hazards	Hazard Control
Clean the area of any remaining water.	Slip	Use a 'wet floor' mop & warning sign.

RESULTS AND DISCUSSION

The implementation of community service activities at CV Mitra Berkah has provided several important achievements:

Implementation of SMK3-based POB

1. The accompanying team has successfully compiled and socialized the **Standard Operating Procedure (POB)** for the instant rice production process in accordance with the principles *of the Occupational Safety and Health Management System (SMK3).*
2. Employees and company leaders are beginning to understand the importance of **occupational hygiene**, cross-contamination control, and the use of **Personal Protective Equipment (PPE) at work**.

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3. The work environment becomes more orderly, clean, and safe in accordance with the basic standards of Government Regulation No. 50 of 2012 concerning the implementation of SMK3.

Improving Hygiene and Food Safety Knowledge

1. Employees and business owners receive training on potential microbiological hazards, especially the risk of *Bacillus cereus* and *Staphylococcus aureus contamination* in instant rice products.
2. The implementation **of simple Good Manufacturing Practices (GMP)** has begun to be integrated into the production flow, so that product quality is more guaranteed.

Product Safety & Hygiene

1. Instant rice products and ready-to-eat cooked rice are at risk of being contaminated with *Bacillus cereus* and other pathogens if not properly controlled.
2. An innovative strategy to extend shelf life is the use of natural antimicrobial ingredients, e.g. spice extracts (Albaridi, Badr, Ali, & Shehata, 2022).

Quality and Production Process

1. The organoleptic quality of instant rice is influenced by the pre-treatment conditions, final moisture content, and drying process parameters (Lin, Wang, & Huang).
2. A recent literature review summarizes global instant rice production methods, including extrusion, autoclave-retrogradation, and freeze drying, along with their effects on sensory quality (Yadav et al., 2024).

In addition to hygienic aspects, **occupational safety and health (K3)** are crucial in the food industry. According to Government Regulation of the Republic of Indonesia Number 50 of 2012 concerning the Implementation of the Occupational Safety and Health Management System (SMK3), every business actor is obliged to implement occupational safety standards to ensure a safe, comfortable, and hygienic work environment.

The application of SMK3 to MSMEs, such as CV Mitra Berkah, not only protects workers from the risk of work-related accidents but also helps maintain consistent product quality. Awareness of SMK3 that is integrated with the hygienic food production process will increase the competitiveness of MSMEs in the market, both locally and nationally.

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CONCLUSION

Based on the results of the mentoring activities, it can be concluded that:

1. **SMK3-based POB** applied to CV Mitra Berkah is able to increase workers' awareness of occupational safety, health, and hygiene, thereby supporting the creation of safer instant rice products.
2. The implementation **of SMK3-based POB** not only improves work safety, but also strengthens the product's image as hygienic and healthy instant food.
3. **Food hygiene training** strengthens employee knowledge related to microbiological hazard control, so that product quality can be more guaranteed and in accordance with ready-to-consume food standards.

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