

Halal product guarantee system in powdered goat milk production house



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ABSTRACT

The halal product guarantee system is a criterion that must be met in halal certification activities in order to guarantee and maintain the consistency of the halal product process so that it complies with applicable laws. Processing of powdered goat milk is carried out by adding granulated sugar and vegetable creamer to powdered goat milk products, which in the Decree of the Head of BPJPH No. 748 of 2021 includes critical materials that must have a halal certificate. The decree of the Head of BPJPH No. 57 of 2021 is a reference for the food processing industry. This practical work report aims to determine whether there are critical ingredients in the product and the efforts made in implementing the halal assurance system at powdered goat milk production houses. The problem-solving methodology used is observation, problem formulation, interviews, literature study, documentation, and checklist forms with evaluation criteria referring to the Decree of the Head of the Halal Product Guarantee Agency No. 57 of 2021. The evaluation results show that powdered goat milk production houses have implemented 74.2% of the criteria, and 25.8% of the criteria that have not been met are caused by the negligence of the workforce who do not use masks and gloves; the majority of production processes still use manual methods and a hot room.

Keywords: Halal certificate, Halal product guarantee system, Goat milk, Powdered milk

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INTRODUCTION

Goats are one of the milk-producing animals. The Etawa Cross-Breed goat has a large population on the island of Java and is known as a potential milk producer (Agustina et al., 2020). Goat milk in Indonesia is usually sold as fresh milk in plastic packaging. However, fresh goat's milk is less interesting than fresh cow's milk because goat's milk is synonymous with a distinctive pungent odor and a stronger taste than fresh cow's milk. Even though goat's milk has a high protein content and relatively low fat compared to cow's milk, the smaller size of goat's milk fat molecules makes goat's milk easier to digest (Novita et al., 2006).

The existence of the majority of Muslims in Indonesia makes food product entrepreneurs need to pay more attention to the products they make and whether they meet the criteria for halal food following Islamic law, where the criteria for halal food are not only seen in terms of the ingredients used do not contain Not only animals or unclean materials which are forbidden in Islam but also terms of the production process, the equipment used to create the final product must be ensured that it is not contaminated, let alone contain materials that are forbidden in Islamic law (Muslimin, 2019). The importance of guaranteeing halal products is to eliminate consumer doubts about the product to be consumed while at the same time giving Muslim consumers the right to the halalness of a product. To carry out halal guarantees on their products, business actors need to compile, implement, and maintain a system that is the basis for evaluating halal product guarantees in managing materials, production processes, products, resources, and procedures in order to maintain the consistency of the Halal Product Process. Powdered milk is a dairy product obtained by reducing most of the water through the drying process of pasteurized fresh milk and recombined milk, with or without the addition of permitted

vitamins, minerals, and food additives. Powdered milk includes full-fat, low-fat, and non-fat powdered milk (BSN, 2006).

The quality of powdered goat milk produced is undoubtedly influenced by the quality of the raw materials used during the production process. Factors controlling the quality of powdered milk products made from goat's milk during the processing process start from the milking of goat's milk carried out by breeders until the goat's milk arrives at the Production House of powdered goat milk to be processed into powdered milk sachets ready for delicious brewing and healthy. Adding a certain ingredient during the powdered goat milk production process aims to add taste, aroma, shape, and attractiveness to the product (Elisa, 2019; Ratya et al., 2017). The addition of granulated sugar and vegetable creamer to the powdered goat milk product, according to the decision of the head of BPJPH No. 748 of 2021, are critical materials or materials that have the potential to originate, contain, or be mixed with food ingredients (BPJPH, 2021).

Creamer is a powder made from fat or vegetable oil and other ingredients, with or without the addition of permitted food additives and packaged (Nirmala et al., 2017; Siagian et al., 2017). The creamer product is said to be vegetable/non-dairy creamer because the main raw materials are hydrogenated vegetable oil, glucose syrup, and other additives such as protein caseinate, emulsifiers, stabilizers, and anti-caking agents, which are mixed into an emulsion solution and then dried using the spray drying method (Rizqiati et al., 2021). Even though vegetable creamers are made from plants such as corn syrup, usually using emulsifiers to unite fat globules dispersed in water will be haram if obtained from unclean animals such as lecithin from pigs or anti-caking agents which may come from ingredients of animal origin. Hence, it is necessary to ensure its halal status. Granulated sugar also comes from materials that can be confirmed as halal. However, it becomes a critical point because refining or refining it must ensure that it does not use activated carbon material derived from animal bones. If using animal bones, it must also be ascertained whether the animal comes from halal or haram animals because it is not slaughtered according to Islamic law.

Based on Law No. 33 of 2014 concerning guarantees of halal products, business actors should guarantee the halalness of the products produced, not only the final product. However, they must ensure that they are halal from all aspects, from the provision of materials, storage, processing, packaging, and distribution to the presentation of the product to the hands of consumers, and must implement Process Halal Products following the provisions. Business actors who produce products derived from animal-derived ingredients or those containing other critical materials that are feared to affect the halalness of the product must include supporting documents for the halalness of the products they make following the Decree of the Minister of Religion No. 748 of 2021 regarding the types of materials that must be halal certified. The halal product process that is carried out needs to implement a halal product guarantee system that has been stipulated by the Halal Product Assurance Organizing Agency (BPJPH) with the latest BPJPH Head Decree No. 57 of 2021 regarding the criteria for a halal product guarantee system with 5 existing criteria, namely commitment and responsibility, materials, Halal Product Process (PPH), products, and monitoring and evaluation. The SJPB criteria are applied in halal certification activities to guarantee and maintain the consistency of the halal product process so that it complies with applicable laws. The implementation of practical work activities carried out at the Powdered Goat Milk Production House focuses on implementing a halal product guarantee system as an effort to obtain a halal certificate because, since its establishment in 2019, it only had a distribution permit from BPOM RI and is still working on permanent halal certification. Maintain the halal product as much as possible.

RESEARCH METHOD

Materials

The ingredients used to manufacture powdered goat milk are Etawa cross-breed goat milk, granulated sugar, and non-dairy creamer. The tools in the powdered goat milk production house are pans, gas stoves, baking sheets, basins, spatulas, spoons, scissors, refrigerators, chillers, ovens, grinders, sealers, plastic filters, aprons, and napkins.

Methods

The method used to solve problems in powdered goat milk production houses is carried out in several stages. Stages of problem-solving include observation, problem formulation, data collection, analysis, and conclusion.

1. Observation.

Observations were made by directly observing the criteria for a halal product guarantee system at the powdered goat milk production house, including commitment and responsibility, materials, halal product processes, products, and monitoring and evaluation.

2. Interview.

Interviews were conducted directly with the head of production, administration, finance, and several employees involved in the production process. In this case, the interview was conducted based on a list that had been prepared with various questions according to the situation at the time the interview took place.

3. Literature review.

A literature study was carried out by looking at the suitability of existing data in the field during practical work with Law No. 33 of 2014, Minister of Religion Regulation No. 26 of 2019, Decree of the Head of the Halal Product Assurance Organizing Agency Number 57 of 2021 concerning Criteria for a Halal Product Assurance System and Decree of the Minister of Religion Number 748 of 2021 concerning Types of Products Requiring Halal Certificates.

4. Documentation.

Documentation is carried out to collect data from records of raw material formulations, production processes, BPOM RI distribution permits, and other product documentation.

5. Checklist form.

The checklist formula contains a list of factors that must be observed. Filling in the checklist form was carried out by direct observation at the powdered goat milk production house to determine the suitability of the factors that serve as guidelines in the halal product guarantee system.

Data Analysis

Data analysis was carried out after all existing data had been collected and obtained through observation, interviews, and literature studies. Data analysis using GAP analysis or gap analysis in a company in the planning or evaluation stages is used to find out the criteria for a halal product guarantee system that has not been met at the powdered goat milk production house, then proceed with a fishbone diagram to find out the cause of the gap or the criteria are not met.

RESULT AND DISCUSSION

Halal certificates are a way for Muslim consumers to get assurance that their products are halal. The product guarantee system is a halal product guarantee system to convince the public that the products produced are consistently halal during production. Before registering for a halal certificate, business actors must understand and apply the criteria for their company's halal product guarantee system.

Table 1. Percentage of halal product guarantee system application in powdered goat milk production house.

No	Halal Product Guarantee System Criteria	Number of requirements	Total		Percentage	
			Applied	Not applied	Applied	Not applied
1	Commitment and responsibility	8	5	3	62.5%	37.5%
2	Ingredients	9	8	1	88.9%	11.1%
3	Halal Product Process	4	3	1	75%	25%
4	Product	6	4	2	66.7%	33.3%
5	Monitoring and evaluation	4	3	1	75%	25%
Total		31	23	8	74.2%	25.8%

Analysis of the results of problem-solving carried out at the powdered goat milk production house based on the Decree of the Head of the Halal Product Assurance Organizing Agency No. 57 of 2021 concerning Criteria for the Halal Product Guarantee System as a reference for a company in producing guaranteed halal products and consistency in producing hygienic, quality and halal products.

Table 1. shows the results of the percentage of Halal Product Guarantee System criteria for powdered goat milk production houses obtained based on the gap analysis.

Commitment and Responsibility

According to the decision of the head of the Halal Product Guarantee Agency (BPJPH) No. 57 of 2021, the halal policy is a written statement regarding the company's commitment to consistently produce halal products, including consistency in the use and procurement of raw materials, additives, and supporting materials as well as consistency in the halal production process (Ali, 2016). The halal policy is disseminated to all related parties using various communication media (audio, visual, and audio-visual), records/records of evidence of socialization, and posters of the halal policy in the production area. Business actors are committed to the availability of resources and halal certainty and assign a person in charge/halal supervisor to maintain the consistency of the halal products made and provide training/competence in the halal field while always keeping all documents on the implementation of activities (Sup, 2023).

Based on observations made on the criteria for commitment and responsibility, 62.5% of the eight aspects in BPJPH regulation No. 57 of 2021. The aspect that has yet to be fulfilled is that there is no evidence of socialization of halal policies because, according to the head of the production's narrative, so far, halal policies have only been socialized verbally, so there is no evidence of socialization. No posters/placards of halal policies have been made. Some personnel/workforce in the production room have yet to implement halal consistency because they chatted and joked during the processing process by not using gloves and masks, which were feared would cause contamination later, such as splashes of saliva and sweat. So it is important to provide training on product halal so that the workforce is more understanding and sensitive to the production environment. The training/competence provided was only regarding milk processing to around 20 members who are also workers, and product quality standard training in 2021 was attended by the head of the business unit leadership (Supriyadi & Asih, 2021).

Ingredients

Raw, additional, or auxiliary materials are guaranteed halal materials that a certificate can prove. If there are critical materials in the processing process, they must be accompanied by supporting documents that guarantee.

Based on observations that have been made, the material criteria have implemented 88.9% of the nine aspects contained in BPJPH regulation No. 57 of 2021. The criteria for materials that are still not met are simply not monitoring and maintaining material supporting documents which include the validity period and validity because based on the Decree of the Head of BJPH No.748 of 2021 concerning the types of products that require halal certificates for food additives such as crystal sugar or granulated sugar and vegetable creamer must be supported with a halal certificate because both of these materials are included in critical ingredients where creamer is a critical material that needs to be considered the origin of the ingredients because creamer is made from milk which in its manufacture goes through a separation process with enzymes, whether enzymes obtained from the fermentation results come from halal animals such as calf stomachs or unclean ones such as pig stomachs must be ascertained first, also the fermenting media used for the growth of microorganisms make sure it is not a media that is forbidden, while the granulated sugar that causes b Sugar is included as a critical material due to its refinement or purification process which must be ensured that it does not use activated carbon material derived from animal bones, if using animal bones it must also be ascertained whether the animal comes from an animal that is halal or unlawful because it was not slaughtered according to the Shari'a Islam. The goat milk production house has a list of material purchases. It always checks the labels, conditions, and quantity of materials purchased when receiving and storing raw materials.

Halal Product Process

Halal Product Process (PPH) is a series of activities to ensure product halalness, including the provision of materials, processing, storage, packaging, distribution, sales, and product presentation (BPJPH, 2021)

Based on observations that have been made, the criteria for the process of halal products have implemented 75% of the four aspects in BPJPH decision No. 57 of 2021 with the criteria for the process of halal products that have not been met, namely the production space has not been maintained so that it is not contaminated with unclean materials or materials that are forbidden due to the lack of supervision, some workers were caught off guard by joking and chatting with each other and not using masks and gloves during the production process. Powdered goat, milk production houses, have a halal management team that is run by members of farmer groups, the community, and the local service where the head of the production section, the head of the administration and finance section, the head of the marketing department and the head of the marketing department. Quality supervisors, halal supervisors from the Agriculture and Food Service of Kulon Progo, and Samigaluh Agricultural Extension Center (BPP) coordinators. Equipment used in production is also washed using washing soap that has been certified halal and is guaranteed to remove or purify all impurities attached to production equipment.

Product

Halal-certified products are registered with BPJPH and approved by the Halal Inspection Agency (LPPOM MUI, 2020). Based on observations made on product criteria, 66.7% of the six aspects have been implemented; two aspects still need to be fulfilled. Namely, the halal certificate has not been obtained for powdered goat milk products, and there is a lack of attention to the implementation of the packaging process because the packaging is still done manually, where The weight of the contents per package is measured using an analytical scale, but unfortunately the workers in charge of the packaging section do not use protective equipment such as masks and gloves so that questions need to be raised regarding the hygiene and halal products produced. The product uses a name that does not lead to something forbidden. Product sensory profile does not lead to haram products. The form of the product is not vulgar/pornographic. Milkku is a powder drink product containing goat's milk packed in aluminum foil in a carton measuring 200 g/10 sachets with a content weight of 20 g in one sachet. The product's odor or sensory taste parameters do not lead to an illegal product because it smells like goat's milk but with a taste adapted to the tongue of Indonesian consumers with the addition of granulated sugar and vegetable creamer made from corn extract. Powdered goat milk products until January 2023 was registered with BPOM RI with number MD 800912001294 and is still being assisted by the Agriculture and Food Defense Service of Kulon Progo Regency to carry out halal certification (Amini et al., 2022; Rumnah et al., 2022).

Monitoring and evaluation

Monitoring and evaluation use internal audit procedures and management reviews, carried out at least once a year by examining all operational procedures. Suppose there is a discrepancy in the implementation of the SJPB certification requirements. In that case, it is necessary to make improvements and report the audit results to BPJPH and the Halal Inspection Agency (BPJPH, 2021).

Based on observations that have been made on monitoring and evaluation criteria, 75% of the 4 aspects of the requirements have been implemented according to the regulation of the Head of the Halal Product Assurance Organizing Agency No. 57 of 2021. Only one has not been fulfilled; the company has never reported the results of an internal audit to BPJPH.

After knowing the method to be used in solving the problem, an analysis of the results of solving the problem is carried out. The analysis aims to solve problems that arise by finding solutions to deal with these problems. The Halal Product Assurance System, or SJPB, is an integrated management created and implemented by companies holding halal certificates to ensure the continuity of the halal production process according to BPJPH requirements. The preparation and implementation of SJPB aims to maintain the continuity of the halal production process so that the products produced can be guaranteed to be halal following applicable regulations and adhere to Islamic law (Aprida et al., 2017; Kensa & Neelamegum, 2016).

After practical work at powdered goat milk production houses, the process of powdered goat milk production started at the hands of the breeder. The production process was carried out at the production house, from raw material receipt, milk testing, material storage, product processing, and product packaging to production house hygiene to obtain a halal certificate. Powdered goat, milk production houses, have made many efforts, namely by fulfilling the 5 criteria for a halal product guarantee system that continues to be pursued properly. Of the 5 criteria set by BPJPH as requirements for registration of halal certification, the production house implemented almost all of the criteria very well because all of the criteria met the above 50% requirements, and even the material criteria reaching 88.9%, with only one aspect of the requirements not being fulfilled.

BPJPH should pay more attention and provide more training to small and medium industries to carry out production management that is much better in the future so that the requirements criteria in the overall halal product guarantee system can be carried out as well as possible. The halalness and hygiene of powdered goat milk products must be paid close attention to maintain consistency. Moreover, milk and raw materials can easily be damaged if further processing is done after a period of time. Therefore, the processing is carried out to prevent damage to goat's milk after milking and take advantage of the potential ingredients in goat's milk for human health. However, while the author was carrying out practical work at the powdered goat milk production house, it was seen that some human negligence occurred during the production process, including employees not using gloves and masks during production. This can be said to be negligence because it is not known whether the hands are guaranteed to be clean or not and not using masks during production, which is in the mixing process until the goat's milk thickens; the employees chat with each other which is possible for contamination through saliva splashes that comes out when chatting.

Analysis of Fishbone diagrams

A fishbone diagram is also called a cause-and-effect diagram because it shows the impact or result of the problems that occur and the various contributing factors. The function of the fishbone diagram is to identify the causes of a problem that occurs so that it will make it easier to take corrective steps based on known causes.

The following is an analysis of the causes of the lack of implementation of the halal product guarantee system using a fishbone diagram analysis, which can be seen in Figure 1.

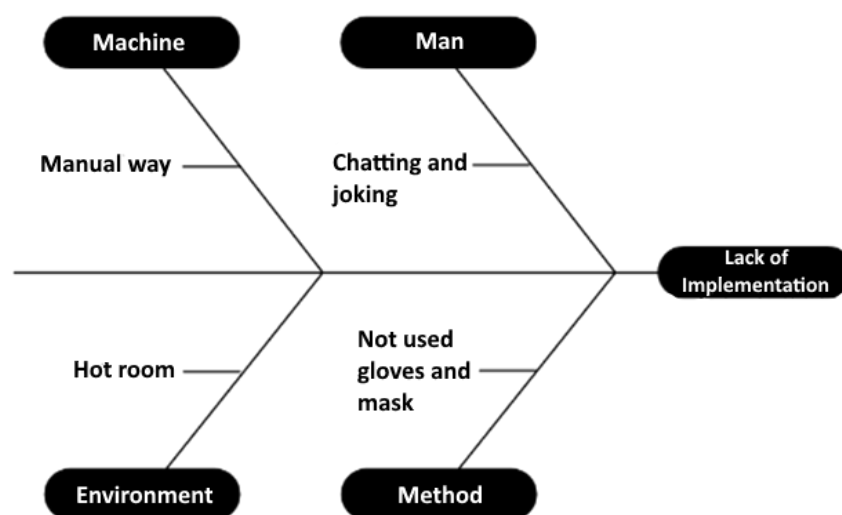


Figure 1. Fishbone diagram of the lack of application of the halal product guarantee system.

Based on the fishbone diagram above, it can be seen that the factors that cause product defects come from human, machine, method, and environmental aspects. The following is an analysis of the factors causing the lack of implementation of SJH at the Powdered goat milk Production House (Abhiyoga & Erwanto, 2019; Hartina et al., 2019):

1. Man

Human negligence can occur anytime and anywhere due to a lack of sensitivity to the surroundings. It could also be because the production process is carried out only to meet demand needs, so employees or workers at the Milkku powdered goat milk production house do their work relaxedly while chatting and joking with other workers without wearing masks. This will affect workers' hygiene guarantees and hygiene guarantees for powdered goat milk products that are being processed.

2. Method

In the packaging process, there are things that the workforce needs to pay attention to, such as product hygiene. During the packaging process, some workers did not use gloves and masks, so the mixing was carried out while chatting with the workers who did not use masks and gloves. Even though masks, gloves, and flip-flops have been provided for use while in the production house.

3. Machine

Most of the production process uses labor, such as material storage, processing, equipment washing, and packaging. Processing of ingredients, starting from thickening and mixing to cooling, still uses the conventional method, namely only using a gas stove and a large frying pan with the help of a spatula. The material is cooled by aerating it at room temperature and then baking it at high temperature. However, soon, a spray dryer machine will only be used, which is still in the manufacturing stage.

4. Environment

The closed production room causes heat when production is carried out during the day. Production houses have no coolers, air conditioners, or fans. This makes the workers sweat easily because the production process of stirring the milk until it hardens also requires much energy to sweat, so it is feared that it will get on the powdered milk product being processed.

CONCLUSION

After doing practical work at the Powdered Goat Milk Production House, the author made various observations on the production process and the implementation of the halal assurance system that was carried out to obtain a halal certificate. The conclusions can be drawn as follows: The Halal Product Assurance System implemented in the powdered goat milk production house is quite good because several requirements still need to be met. The critical ingredients in products are granulated sugar and vegetable creamer, but these two ingredients already have valid halal certificates. The implementation of the production process carried out by the Powdered Goat Milk Production House follows Islamic law. The efforts made by the powdered goat milk production house to guarantee the halalness of powdered goat milk products are continuing to improve the system. The powdered goat milk production house has fulfilled 74.2% of the criteria for a halal product guarantee system. Factors causing the lack of implementation of the halal product guarantee system in several criteria are caused by the negligence of the workforce.

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