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## ENHANCING FOOD SAFETY AND HALAL REGULATORY AWARENESS THROUGH IN-HOUSE TRAINING AT POLITEKNIK ATK

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### Abstrak

Peningkatan kesadaran terhadap keamanan pangan dan kehalalan produk menjadi aspek penting dalam industri pangan, seiring dengan kewajiban sertifikasi halal di Indonesia. Serambi Halal Politeknik ATK telah ditetapkan menjadi Lembaga Pendamping Proses Produk Halal (LP3H), yang bertugas mendampingi pelaku UMK dalam proses pengajuan sertifikasi halal jalur self declare. Permasalahan yang dihadapi LP3H adalah karena pemahaman tentang keamanan pangan dan regulasi halal belum secara optimal dimiliki oleh para pendamping halal. Hal ini dapat menyebabkan hambatan dalam proses sertifikasi halal para pelaku UMK. Tujuan dari pelatihan ini adalah untuk meningkatkan pemahaman peserta mengenai prinsip keamanan pangan serta ketentuan regulasi halal yang berlaku. Pelatihan ini dilaksanakan dalam bentuk in-house training dengan metode ceramah, diskusi interaktif, serta studi kasus. Pelatihan diikuti oleh pendamping dan calon pendamping halal yang terdiri dari dosen, pegawai, dan masyarakat umum. Peserta yang hadir baik secara daring dan luring berjumlah sebanyak 20 orang. Evaluasi kegiatan dilakukan melalui pendekatan kuantitatif dan kualitatif yang meliputi pretest, posttest, dan kuesioner evaluasi kegiatan. Hasil evaluasi menunjukkan adanya peningkatan nilai rata-rata peserta dari 83,5 pada pretest menjadi 93,68 pada posttest, yang menunjukkan peningkatan pemahaman peserta setelah mengikuti pelatihan. Selain itu, hasil kuesioner evaluasi kegiatan menunjukkan bahwa sebagian besar peserta memberikan penilaian sangat baik terhadap kualitas materi, kompetensi narasumber, serta penyelenggaraan kegiatan pelatihan. Hasil ini menunjukkan bahwa pelatihan keamanan pangan dan regulasi halal merupakan strategi yang efektif untuk meningkatkan pengetahuan dan kesadaran peserta dalam menerapkan prinsip keamanan pangan serta memahami implementasi regulasi jaminan produk halal dalam mendukung sertifikasi halal di Indonesia.

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### Kata Kunci:

Keamanan pangan  
Industri makanan &  
minuman  
Pendamping halal  
Sertifikasi halal  
Usaha mikro & kecil

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### Abstract

*The increasing awareness of food safety and halal product status has become a critical issue in the food industry, particularly following the implementation of mandatory halal certification in Indonesia. The Halal Center of Politeknik ATK has been designated as a Halal Product Process Assistance Agency (LP3H), responsible*

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**Keywords:**

Food safety  
Food and beverage  
industry  
Halal advisors  
Halal certification  
Micro and small  
enterprises

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*for assisting micro and small enterprises (MSEs) in the halal certification process through the self-declare scheme. However, limited understanding of food safety principles and halal regulations among halal advisors remains a key challenge, potentially hindering certification processes. This study aims to enhance participants' understanding of food safety principles and halal regulatory requirements through an in-house training program. The training was delivered using lectures, interactive discussions, and case studies, involving 20 participants consisting of halal advisors and prospective advisors from academic staff and the general public. A mixed-method evaluation was conducted using pre-tests, post-tests, and questionnaires. The results showed an increase in the average score from 83.5 in the pre-test to 93.68 in the post-test, indicating improved participant understanding. Participants also reported high satisfaction with the quality of the materials, instructor competence, and overall training implementation. These findings indicate that training on food safety and halal regulations is an effective strategy for enhancing knowledge and awareness, thereby supporting the implementation of halal product assurance and certification in Indonesia..*

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## INTRODUCTION

Public awareness of food safety and the halal status of products continues to grow alongside the development of the food industry and consumer demands for safe, high-quality products that comply with halal principles. This increase is influenced not only by religious factors—where food must be halal and thoyyib—but also by awareness of health, hygiene, and food quality [1]. Food safety is a critical aspect of safeguarding public health, as improperly managed food can pose various health risks. On the other hand, for the Indonesian population, which is predominantly Muslim, the halal status of products is a primary consideration in consumption, making the integration of food safety and halal principles essential [2].

The Indonesian government has strengthened the halal product assurance system through the issuance of Government Regulation of the Republic of Indonesia No. 42 of 2024 on the Implementation of the Halal Product Assurance Sector [3] as a derivative regulation of Law No. 33 of 2014 on Halal

Product Assurance [4]. This regulation comprehensively governs the implementation of halal product assurance, including the mandatory halal certification for various products circulating in Indonesia. The implementation of this policy requires human resources who understand both food safety principles and applicable halal regulations and are capable of implementing them in food production processes [1, 5].

ATK Polytechnic Yogyakarta, as a vocational higher education institution under the Ministry of Industry of the Republic of Indonesia, has established the Halal Product Process Assistance Agency (LP3H). LP3H is an institution accredited by the Halal Product Guarantee Agency (BPJPH) of the Ministry of Religious Affairs of the Republic of Indonesia to assist business operators, particularly Micro and Small Enterprises (MSEs), in the halal product certification process through the self-declaration scheme. LP3H's role includes outreach and education, training for Halal Advisors, and technical

Ratri RU, Diana RA, Rofiatun N, Atiqa R, Naimah P, 2026. Enhancing Food Safety And Halal Regulatory assistance for MSMEs, particularly in the food and beverage industry [6]. However, there remains a lack of understanding among Halal Advisors, business operators, and the public regarding the implementation of food safety standards and procedures for compliance with halal regulations. Food safety is an aspect that must be adhered to by the food and beverage industry to prevent contamination of food at every stage of the food handling process [7]. Food safety not only prevents food from biological, chemical, and physical contamination but also aligns with religious teachings, where every Muslim is obligated to consume food that is halal and thoyyib [8]. Thoyyib itself means good, safe, and healthy. Halal food ingredients do not necessarily result in healthy food, as errors in handling or failure to meet sanitation and hygiene standards during processing can occur, thereby endangering health [9]. A lack of understanding of this can pose a challenge in the production and processing of food that meets safety standards and halal requirements [10].

Therefore, conducting training on food safety and halal regulations is a strategic step toward enhancing the capacity and competence of human resources in understanding the basic principles of food safety and the latest halal regulatory requirements. The objective of this training is to improve participants' understanding of food safety principles and applicable halal regulatory requirements. This training also plays a role in improving participants' practical skills in applying food hygiene and sanitation principles [11, 12]. Participants are expected to be able to implement safe food production practices and meet halal product

assurance requirements, thereby supporting government policies.

## METHODOLOGY

The training program, themed “In-House Training: Food Safety and Halal Fatwa Regulations,” was conducted through several stages: preparation, implementation, and evaluation. During the preparation stage, the organizers coordinated with subject matter experts to develop training materials covering basic food safety principles, potential hazards in food production processes, and regulations regarding halal product certification. Additionally, an agenda and evaluation instruments including pre- and post-tests as well as a questionnaire were developed to measure participants' responses to the training. The agenda for the food safety and halal regulation training is shown in Table 1. Preparation activities also included identifying training participants and preparing the necessary facilities and equipment for the duration of the event.

**Table 1.** Training schedule.

TIME (WIB)	ACTIVITY
09.00–09.10	Opening by the Master of Ceremony (MC)
09.10–09.25	Opening remarks by the Director of Politeknik ATK
09.25-09.30	Pre test
09.30–10.30	Sesi 1: Food Safety and Good Manufacturing Practice (GMP)
10.30–11.00	Question and Answer Session
11.00–12.00	Session 2: Halal Regulations and Fatwas
12.00–12.30	Question and Answer Session
12.30-12.40	Post-test and Activity Evaluation
12.40–13.00	Closing

The training was conducted both in-person and online, targeting current and prospective halal advisors at LP3H, Politeknik ATK. A total of 20 participants were involved, consisting of faculty members and staff from Politeknik ATK as well as members of the general public. The equipment used included laptops, cell phones, an LCD projector, microphones and speakers, and office supplies. Training materials consisted of PowerPoint presentations from the speakers and a Google Form for evaluation.

The training implementation phase utilized a lecture method to provide a foundational understanding of food safety concepts and halal product certification regulations. This method was supplemented with interactive discussions, allowing participants to ask questions, share experiences, and discuss various related issues. Additionally, participants were provided with case studies related to food processing to enable them to analyze potential risks regarding product safety and halal status.

The evaluation phase was conducted to assess the training's effectiveness in enhancing participants' understanding. Before the training began, participants first took a pretest to determine their initial knowledge level regarding the material to be presented. Evaluation was conducted by comparing the pretest results with the posttest results administered after all training material had been delivered. The comparison of these two test results was used to determine the extent of participants' knowledge improvement following the training. Additionally, participants were asked to complete an evaluation questionnaire to assess the quality of the

material, the delivery methods, and the benefits they gained from the training. The training evaluation consists of an instructor evaluation, an assessment of material retention, and an evaluation of the overall implementation of the training activities. The results of this evaluation are then used as a basis for assessing the success of the training program and as a basis for improvements in organizing similar activities in the future.

## **RESULTS AND DISCUSSION**

The "In-House Training: Food Safety and Halal Fatwa Regulations" session was held on Tuesday, March 10, 2026, in the Smart Meeting Room at ATK Polytechnic in Yogyakarta. There were 20 training participants, consisting of 13 lecturers and 5 staff members from ATK Polytechnic, as well as 2 members of the general public, 10 of whom served as halal advisors at LP3H ATK Polytechnic Yogyakarta.

According to the agenda, the event began with participant registration, followed by an opening address by the MC, who provided an overview of the program and ensured all participants were prepared to follow the proceedings. Next, the Director of ATK Polytechnic delivered opening remarks, offering guidance, motivation, and emphasizing the importance of the topics to be covered during the training. Participants were then asked to complete a pre-test. This activity aimed to assess participants' prior knowledge regarding the material to be presented. The event continued with a discussion on Food Safety and Good Manufacturing Practices (GMP), during which participants gained an understanding of the importance of food safety and the application of good production practices in the industry. The training material titles are shown in

Ratri RU, Diana RA, Rofiatun N, Atiqa R, Naimah P, 2026. Enhancing Food Safety And Halal Regulatory

Figure 1. The food safety material was supplemented with an explanation of Good Manufacturing Practices (GMP). The food processing industry ensures product safety by implementing GMP, which are guidelines used to ensure that production processes result in high-quality products that are safe for consumption [13]. The material on Indonesian halal regulations was also supplemented with content related to the concepts of halal certification and halal fatwas.



Figure 1. Training material

The session then continued with a discussion on Halal Regulations and Fatwas. This segment provided insights into legal provisions, halal standards, and their implementation within the industry. Following the presentation, participants were given the opportunity to ask questions directly to the speakers or via the chat feature in the Zoom meeting (Figure 2). A discussion and Q&A session was held for each topic. Participants could ask questions or engage in further discussion regarding the material presented. This interactive discussion aimed to deepen participants' understanding of the material and gain deeper insights directly from practitioners or experts [14].



Figure 2. Interactive discussion

Following the presentations by the two speakers, the training session concluded with a post-test, an evaluation of the event, and a group photo of the speakers and in-person participants (Figure 3). This was intended to assess the participants' improved understanding and to gather feedback on the event's execution. To officially conclude the event, the MC delivered a brief summary of the activities, expressed gratitude to the speakers and participants, and expressed the hope that the knowledge gained would be useful and applied.

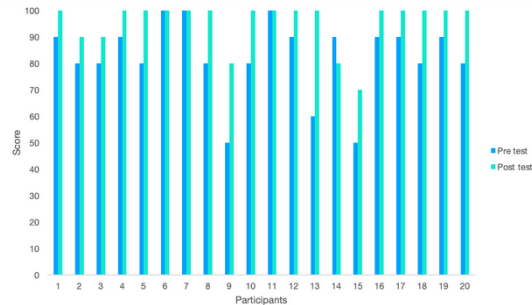


Figure 3. In-house training participants

The pretest results showed that participants' initial level of knowledge regarding food safety and halal regulations was in the "fairly good" category, with an average score of 83.5 out of 100, indicating a baseline level of understanding that, while adequate, was not yet evenly distributed among participants [10].

After completing the training, a post-test was conducted to measure the participants' improved understanding of the material presented. The post-test results showed an increase in the average score to 93.68 out of 100 (Figure 4), indicating that the training was effective in enhancing participants' knowledge. This increase in scores indicates that the training material delivered by the instructors was effective in strengthening participants' understanding of various aspects related to halal regulations, the halal certification system, and the fundamental

principles of food safety in food production and processing, thereby reinforcing the role of structured training in enhancing participant competence [15, 16].



**Figure 4.** Participants' pre-test and post-test results

These findings provide empirical evidence of the effectiveness of training interventions in improving participants' knowledge and understanding in the context of food safety and halal regulatory compliance.

In addition to the cognitive improvement reflected in the test results, the results of the evaluation of the quality of the training program's implementation indicate that most aspects of the program received very high ratings, with average scores ranging from 4.56 to 4.88 on a 1–5 scale. Participants reported that

the material presented was easy to understand, the information provided in the handouts was sufficient, and the use of examples in the presentation helped them grasp the concepts being explained. Interactive and contextual training methods also played a role in enhancing participants' learning effectiveness [17]. Additionally, participants gave very positive ratings regarding the instructors' competencies, particularly in terms of mastery of the material, clarity of delivery, and the instructors' ability to motivate participants to understand the training material.

Evaluations of the organizational aspects of the event also indicated that the training was conducted according to the scheduled timeline, the discussion process proceeded smoothly, and coordination between the organizing committee and the instructors was effective. The committee's service and discipline in managing the event also received positive feedback from participants. This high quality of training organization also served as a critical supporting factor in enhancing participant engagement and facilitating effective knowledge transfer throughout the training process [18].

**Table 1.** Evaluation results of community service activities

No	Aspect Evaluated	Assessment Indicator	Average Score (1-5)	Category	Remarks
1	Speaker 1	Handout information	4.81	Very good	The information in the handout is highly sufficient
		Handout material	4.75		The material is very easy to understand
		Quality of visual aids	4.56		The visual aids are highly adequate
		Timeliness	4.75		Delivered on time
		Clarity of material	4.69		The material is very easy to understand
		Mastery of material	4.81		The material is well mastered
		Delivery of material	4.69		The material is delivered very clearly
		Interaction with participants	4.75		Very enthusiastic in delivering the material
2	Speaker 2	Handout information	4.75	Very good	The information in the handout is highly sufficient
		Handout material	4.69		The material in the handout is very easy to understand
		Quality of visual aids	4.81		The visual aids are highly adequate
		Timeliness	4.81		Delivered on time
		Clarity of material	4.88		The material is very easy to understand

		Mastery of material	4.88		The material is well mastered
		Delivery of material	4.88		The material is delivered very clearly
		Interaction with participants	4.88		Very enthusiastic in delivering the material
		Schedule adherence	4.69		The schedule is highly appropriate
		Class participation	4.56		The class was active
		Assignments	4.63		Assignments greatly support understanding
3	Instructor	Relevance of examples	4.81	Very good	The examples provided are highly relevant
		Clarity of material	4.81		The examples greatly facilitate understanding
		Assignment duration	4.75		The time allocation is sufficient
		Material evaluation	4.75		Evaluation supports understanding
		Discipline	4.63		The committee is highly disciplined
4	Organizer	Service quality	4.69	Very good	The committee provides excellent service
		Coordination	4.69		Coordination between committee and instructors is very good

Overall, the evaluation results indicate that the food safety and halal regulation training conducted was successful and effectively improved participants' understanding of the provided material (Table 2). The evaluation results demonstrate high participant satisfaction regarding the quality of the material, the instructors' competence, and the overall organization of the training. However, increased knowledge is not always directly followed by behavioral changes in food processing practices, as the translation of knowledge into practice is often influenced by factors such as organizational support, resource availability, and habitual work practices [19–22]. Additionally, organizational capacity building and systemic support are essential to ensure that improvements in knowledge can be effectively translated into consistent and sustainable practices within the food industry [23].

## CONCLUSION

The in-house training on food safety and halal regulations held at the ATK Polytechnic in Yogyakarta was successful and had a positive impact on participants' understanding. This was

demonstrated by an increase in participants' average scores from the pretest to the posttest, indicating that the training material successfully enhanced participants' knowledge of food safety principles and the implementation of halal product assurance regulations. Furthermore, the evaluation results indicated a high level of participant satisfaction regarding the quality of the materials, the competence of the presenters, and the overall conduct of the training. Thus, this training activity can serve as an effective initiative to enhance human resource capacity in understanding and applying food safety principles and halal regulations within the food industry. These results indicate that competency-based training plays a strategic role in supporting the implementation of the halal product assurance system and sustainable food safety practices. However, follow-up efforts such as mentoring and periodic evaluations are necessary to ensure that the enhanced knowledge can be consistently implemented in field practices.

## RECOMMENDATIONS

Recommendations for future community service activities to address the limitations of the current program. This section should not include suggestions beyond the scope of subsequent community service activities.

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