

## THE UNDERSTANDING TOWARDS THE INGREDIENTS OF THE IMPORTED CHOCOLATES WITHOUT JAKIM HALAL CERTIFICATION: A SURVEY FROM FOOD EXPERTS AND OPINION LEADERS

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### Abstract

*As customers become more knowledgeable of the halal product in terms of halal certification, halal regulations and halal raw ingredients, the availability of a variety of chocolate products is growing. This situation makes the consumers continue to have concerns about the quality, sanitation, and halal status of chocolate products, particularly the ingredients of the chocolate. The issue arises when the languages used on the packaging and labels of the imported chocolates cannot be understood by the consumer of importing country. In addition, there are a variety of ingredients from unknown sources that can be a threat to the halal status of imported chocolate. Thus, this research is conducted to assess the food experts and opinion leaders particularly from the Halal Management Unit Division of Sarawak Islamic Religion Department and Halal Industry Management, Academy of Contemporary Islamic Studies (ACIS), Universiti Teknologi MARA (UiTM) Shah Alam regarding their understanding of the halal status and ingredients of imported chocolates without Department of Islamic Development Malaysia (JAKIM) halal certification and the uncertainties associated with the products. The study adopts a quantitative method where the primary data were collected by surveying the food experts and opinion leaders. The collected data were analysed using descriptive analysis. The findings showed that the food experts and opinion leaders agreed that the list of the ingredients itself is not enough to reassure the consumers that the chocolate product without the halal logo is indeed halal as the processing of the chocolate includes the usage of several critical ingredients such as emulsifier, milk, fat and oil, flavouring and colouring.*

**Keywords:** Halal, Imported chocolate, Food ingredients, Food experts, Opinion leaders

## 1. INTRODUCTION

The increasing amount of halal customers, together with the widespread availability of halal-certified food products, are likely to boost the worldwide halal industry in the coming years. As customers become more knowledgeable of the halal product in terms of halal certification, halal regulations and halal raw ingredients, the availability of essential products is growing. Since the industry grows at roughly twice the amount rate of global expansion, there are substantial prospects for development and the rise of international halal goods (Azam & Abdullah, 2020). Malaysia has considerable government backing and determination to develop and establish Malaysia as a worldwide halal centre (Malay Mail, 2019).

Malaysia is one of the nations where halal certification is granted by the authorities. To import the products in Malaysia, the product's minimum net mass, volume, or quantity of contents should all be stated. The brand and postal address of the producer, handler, administrator of the manufacturing rights, or distributor should be stated too. The company and business address of the supplier in Malaysia, as well as the name of the company's state, should be included on the packaging (Ngumbang, 2020). Department of Islamic Development Malaysia (JAKIM) is Malaysia's government body that governs the Islamic issues to protect the Muslim consumers in Malaysia, except up to the current date, there is no such ruling that prohibits the importation of non-halal products to Malaysia.

Malaysia's largest trading associates for the imported chocolate and other products that contain cocoa in 2020 are Australia, 15.3%, which is equivalent to \$19.2 million, Singapore 14%, \$17.7 million, and Italy 10.2%, \$12.8 million US dollars (UN Comtrade, 2021). The varieties of imported cocoa-based products in Malaysia may be certified as halal by foreign certification bodies recognized by JAKIM that comply with Malaysian procedures and guidelines. JAKIM collaborating with SIRIM (Standards and Industrial Research Institute of Malaysia) and DSM (Department of Standards Malaysia) to establish a Malaysian halal food regulation for the purposes of synchronisation and harmonization. In addition, JAKIM also had recognised 73 international certification agencies and (Asa, 2017). On the other hand, there are also imported chocolate products without any halal logo from any foreign certification bodies.

The technical and scientific terms used in the ingredients list are unfamiliar to the consumer with no food science background. These varieties of ingredients are from a range of sources, either plants, animals or chemically synthesized.

The detection of alternatives and the correct identification of highly vulnerable animal species are the two main problems in the food industry (Akter et al., 2021). Emulsifiers and cocoa butter are two ingredients of chocolate that are accused of having lard (Suparman et al., 2015). In certain countries, food producers tend to combine vegetable oil and lard to lower manufacturing costs since lard is the most affordable and easily obtainable fat for the food industry. The use of different terms as a substitution for the pig as an ingredient used in the chocolate might cause Muslim consumers to consume haram ingredients (Che Man et al. 2004).

The varieties of chocolate products without halal logo in the Malaysia market raise a lot of questions regarding their sources of raw material and processing with the use of doubtful terms on the packaging list and labelled in a foreign language, Muslim consumers must be cautious and educated with the basic of this subject matter. This research analyses the understanding level of the food expert and opinion leaders specifically from Halal Management Unit Division of Sarawak Islamic Religion Department and Halal Industry Management, Academy of Contemporary Islamic Studies (ACIS), Universiti Teknologi MARA (UiTM) Shah Alam regarding the halal status of the imported chocolate products without JAKIM halal logo in Malaysia and the uncertainties associated with the products.

## **2. METHODOLOGY**

The primary goal of this research is to assess the food experts and opinion leaders from the Halal Management Unit Division of Sarawak Islamic Religion Department and Halal Industry Management, Academy of Contemporary Islamic Studies (ACIS), Universiti Teknologi MARA (UiTM) Shah Alam on their comprehension of the ingredients of imported chocolates without JAKIM halal certification. To achieve the objective, this study adopted a quantitative method where the research is conducted through a questionnaire survey conducted to 40 samples from these two divisions. They come from different backgrounds with different levels and backgrounds such as Food Science, Halal course and Islamic courses. The structured questionnaires were distributed via Google Forms and consist of three parts, namely (1) respondents' demographic background, (2) experts' opinion on the halal status of imported chocolate without the halal logo and (3) experts' opinion on uncertainties associated with imported chocolate without halal logo. Their responses were obtained based 5 Likert scales on five (5) answer options which are "Strongly disagree" (1), "Disagree" (2), "Neutral" (3), "Agree" (4), and finally "Strongly agree" (5). The questionnaires were analyzed

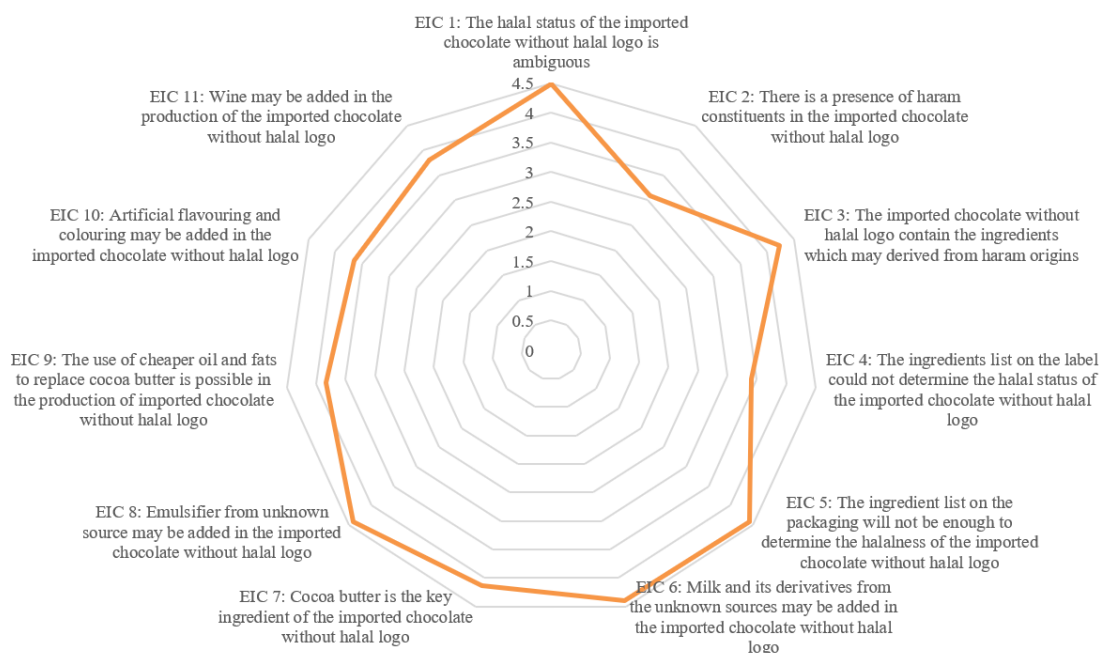
by using descriptive analysis through the latest version of Statistical Package for the Social Sciences (SPSS) software.

### 3. RESULTS AND DISCUSSION

Based on the demographic analysis of the survey questionnaire, the highest percentage of respondents' age is 41 years old and above (32.6%), followed by 23.3% aged 36-40 years, whereas 23.3% out of total respondents aged between 31-35 years, 26-30 years that equivalent to 11.6% and the age group of 20-25 years is 9.3%. The number of female respondents exceeds male respondents with the percentage of 60.5% and 39.5% respectively. Besides, the majority of the respondents are Malay equivalent to 95.3%.

#### 3.1 *The Experts' Opinion on Halal Status of Imported Chocolate Products Without Halal Logo*

Based on the research findings, most of the respondents ( $4.49 \pm 0.703$ ) agree that the halal status of the imported chocolate without the halal logo is ambiguous which is represented by EIC 1 (The halal status of the imported chocolate without a halal logo is ambiguous) as shown in Fig 1. The respondents are fully aware of the uncertainties associated with the imported chocolate product without halal logo due to its processing involves many processes and numerous ingredients from plants, animals and chemically synthesised. The list of critical ingredients such as emulsifier, milk, flavouring and colouring could be inquired for their source and processing and can be halal or haram (Marikkar & Manaf, 2018). This finding is in accordance with the third statement EIC 3 (The imported chocolate without halal logo contains the ingredients which may be derived from haram origins) where the majority of respondents ( $4.23 \pm 0.947$ ) agreed with the statement. Nevertheless, it does not mean that the chocolate product without a halal logo is non-halal, which then proved by second statement EIC 2 (There is a presence of haram constituents in the imported chocolate without halal logo) where the respondents are either neutral or disagree with the statement ( $3.09 \pm 1.25$ ).



**Figure 1.** The radar chart for the mean of experts' opinion on the halal status of imported chocolate without halal logo, with "1" representing "strongly disagree" and "5" represents "strongly agree"

Muslims are aware of the permissive and restrictive ingredients in their foods, especially as food chains become increasingly complex, potentially leading to ambiguity about input variables and applied perspective unless they are properly prepared and processed in strict accordance with Islamic regulations (Ambali & Bakar, 2012). Thus, the respondents partially agree and disagree ( $3.40 \pm 1.237$ ) with the statement EC4 (The ingredients list on the label could not determine the halal status of the imported chocolate without the halal logo). But subsequently, the majority of the respondent ( $4.4.2 \pm 0.879$ ) agree with statement EC5 (The ingredient list on the packaging will not be enough to determine the halalness of the imported chocolate without the halal logo). Behind the list of ingredients printed on the packaging, there is a lot of important aspects to be examined to make sure that the product is halal. This includes hygiene, processing, distribution, and raw material. JAKIM created the Malaysian Standard on Preparation and Production of Halal Food, MS1500:2009, to ensure that the notion of halal is thoroughly implemented from both the beginning to the finish (Sahilah et al., 2016).

To get the ideal flavour as well as the richness of chocolate, the cocoa beans are combined with additional components like sweetener, milk, flavouring, emulsifier, and many more. Milk has become a component used to distinguish dairy milk from certain types of chocolate (Hashim et al., 2020). Most of the respondents acknowledged these critical ingredients can be added into the processed chocolate products, where the mean for statement EIC 6

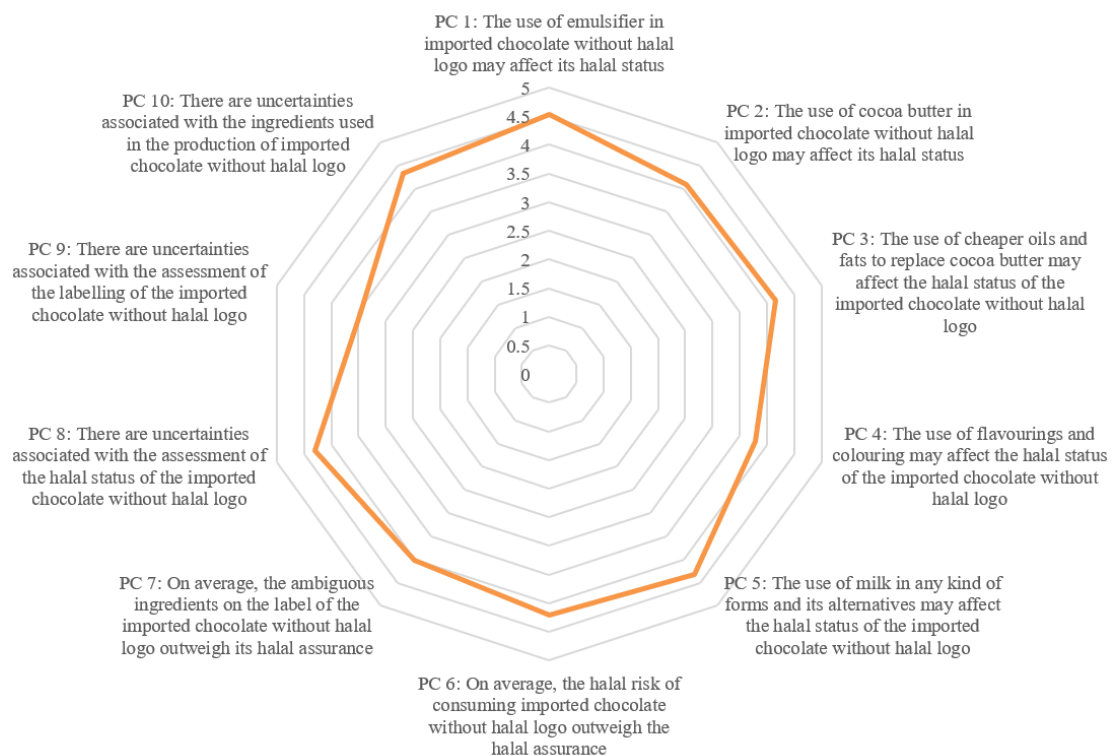
(Milk and its derivatives from the unknown sources may be added in the imported chocolate without halal logo), EIC 7 (Cocoa butter is the key ingredient of the imported chocolate without halal logo) and EIC 8 (Emulsifier from an unknown source may be added in the imported chocolate without halal logo) are  $4.40 \pm 0.791$ ,  $4.14 \pm 0.774$  and  $4.42 \pm 0.763$  respectively.

In comparison with the above paragraph, the respondents were quite reluctant to approve the statement EIC 9 (The use of cheaper oil and fats to replace cocoa butter is possible in the production of imported chocolate without halal logo), with a mean of  $3.84 \pm 0.924$ , EIC 10 (Artificial flavouring and colouring may be added in the imported chocolate without halal logo), with mean  $3.65 \pm 0.997$  and EIC 11 (Wine may be added in the production of the imported chocolate without halal logo) with mean  $3.81 \pm 1.097$ . While the usage of these critical ingredients in the production of chocolate can reduce the cost of manufacturing, some chocolate brands will use high-quality origins to maintain the value of the chocolates.

### ***3.2 The Experts' Opinion on Uncertainties Associated with Imported Chocolate Products Without Halal Logo***

This section analysed the respondents' professional capacity (PC) which includes the certainties and uncertainties of the ingredients present in the imported chocolate products without halal logo. From the findings represented by the radar chart of the mean of respondents' opinion in Fig 2, the majority of the respondents agree with the statements PC 1 (The use of emulsifier in imported chocolate without the halal logo may affect its halal status) with mean of  $4.53 \pm 0.735$ , PC 2 (The use of cocoa butter in imported chocolate without the halal logo may affect its halal status) with mean of  $4.09 \pm 0.895$ , PC 3 (The use of cheaper oils and fats to replace cocoa butter may affect the halal status of the imported chocolate without halal logo) with mean of  $4.16 \pm 0.924$  and PC 5 (The use of milk in any kind of forms and its alternatives may affect the halal status of the imported chocolate without halal logo) with mean of  $4.33 \pm 0.778$ . Because cocoa butter is a costly ingredient of chocolate and plays a major part throughout the melting characteristics of chocolate, its supply in the industry is sometimes unexpected. Along with its structural characteristics, it is in great need in both the food sectors as well as pharmaceutical sectors. There has also been a significant attempt to substitute it, whether entirely or partly, with other vegetable oils, it is known as cocoa butter substitutes and that would be much inexpensive. Lard, which is the lowest kind of fat are commonly accessible in the food sector, and this can be another option for cocoa butter. Lard, as well as processed lard, might be mixed with some vegetable fats to make

margarine, butter, and other food products (Azir et al., 2017). According to the industry experts, due to the increasing popularity in chocolate demand, the little costs of labouring on a cocoa, a scarcity in cocoa butter supply will pose a persistent risk to food producers where this show that it is possible for the usage of cheaper oils in the production of chocolate since cocoa butter is hard to get and expensive (Quek et al., 2020).



**Figure 2.** The radar chart for the mean of the respondents' opinion on uncertainties associated with the imported chocolate product without halal logo based on their professional capacity

Unlike cocoa butter, emulsifiers may be added in smaller amounts in the chocolate product and have the capacity to change the consistency of foods. This is crucial in the chocolate manufacturing process, such as sifting, shaping, and layering (Tisoncik, 2010). If the emulsifier comes from haram origins such as poisonous plants, haram animals like pigs and their derivatives and permissible animals that were not slaughtered according to Syariah law, the status of the chocolate product will be affected. While milk chocolate which is made of a polypeptide, provide nutrition, and also give taste, consistency, as well as movement characteristics to the chocolate (Gutiérrez, 2017). Several latest developments in this subject involve the exchange of genes from one animal to another, whether to increase nutrient benefit or to inhibit a certain genetic in animals. The transmission can occur might be due to the desire to enlarge the animals and produce more meat and

dairy products. To boost milk output, all permissible products will be considered halal until they become tainted with haram elements. Bovine hormone, for instance, increases milk yield in animals such as cows and goats (Khattak et al., 2011).

Remarkably most of the respondents were neutral (34.9%) statement PC 4 (The use of flavourings and colouring may affect the halal status of the imported chocolate without halal logo) with a mean of  $3.79 \pm 1.013$ . Nevertheless, 23.3% out of the total respondents agree and about 32.6% of the respondents strongly agree which exceeds the neutral response. Flavouring and colouring additives can be derived from plants, animals, or artificial origins. These substances are chemicals that have been utilized in meals, beverages, medicines, skincare, home craft projects, educational environments, and so forth (Grumezescu & Holban, 2017). Colourants add colour to the finished goods, while flavouring contributes a certain taste or aroma to the goods. The usage of additives including flavourings and colouring that comes from several sources such as animal, plants and chemical is a must in the production of chocolate as chocolate have different types of flavours and varies in many colours.

In general, the respondents agree that the halal risk of consuming imported chocolate products without a halal logo outweigh its halal assurance from PC 6 (On average, the halal risk of consuming imported chocolate without a halal logo outweigh the halal assurance) with a mean of  $4.21 \pm 0.894$ . This opinion is by the subsequent statement, PC 7 (On average, the ambiguous ingredients on the label of the imported chocolate without halal logo outweigh its halal assurance) with the mean of  $4.02 \pm 0.859$ . The origin of imported items is critical since knowledge, experience, and execution differ from one country to another. Ambiguous ingredients printed on the chocolate packaging without any halal logo can outbalance the halal assurance. The manufacturing line at global firms, particularly outlets, is assumed to include swine and liquor as artificial ingredients alongside food and beverage culinary delights, and thus it is regarded as illegal as well as a guiding principle for Muslim customers deliberating over purchasing those products (Wijayanti et al., 2020).

The halal status of an item becomes a concern and a duty for Muslim customers about religious observance. Without background knowledge related to the food ingredients contained in food products particularly without halal logo, Muslims may put themselves in uncertainty and incapable of making the best purchase decision when they are trying to analyse the halalness of the products based on the ingredients printed on the food packaging. This is especially true when the food experts agree with the



statement in PC 8 (There are uncertainties associated with the assessment of the halal status of the imported chocolate without halal logo) with the mean of  $4.30 \pm 0.803$ , PC 9 (There are uncertainties associated with the assessment of the labelling of the imported chocolate without halal logo) with the mean of  $3.47 \pm 1.260$  and PC 10 (There are uncertainties associated with the ingredients used in the production of imported chocolate without halal logo) with the mean of  $4.33 \pm 0.715$ . The halal sector has grown to be a profitable one, providing great economic opportunities for manufacturers and companies. Each item, especially halal items, involves several phases and requires a lot of management until the items complete the last stage for customers. Today's modern food business has produced a wide range of dietary ingredients derived either from organic or biological origins (Damit, 2017).

#### 4. CONCLUSION AND RECOMMENDATIONS

In conclusion, numerous chocolate products are commercially available, therefore discovering the sources of their ingredients for Muslims to consume is challenging due to the complexities of knowing whether they are created from halal origins. People may have difficulty understanding scientific terms. Since the origins of certain ingredients such as cocoa butter, emulsifier, oil and fat, dairy product, flavourings, and colourings might be forbidden animals or consist of unlawful components, they are considered critical. Imported chocolate without a halal logo is permissible and it can be ingested only if the contents are derived from halal origins and not from unknown and non-halal sources such as pig and its derivatives and permissible animals that were slaughtered not in compliance with Syariah law. The respondents highly agreed that the halal status of the imported chocolate without the halal logo is ambiguous and fully aware of the uncertainties associated with the imported chocolate product without halal logo due to its processing involves many processes and numerous ingredients from plants, animals and chemically synthesised. The findings from this research proved that there are doubts linked with the valuation of the labels printed on the product without a halal logo. Muslim buyers ought to be cautious about the halal integrity of the products they take. A practising Muslim should raise their awareness about the halal threat and concern of the imported chocolate without halal logo in Malaysia. While Muslim buyers get a better understanding of their faith, it is indeed more likely that they would become highly selective about the goods and services they purchase and utilize.

The authors believe that this survey raises several hypotheses that merit further research about the view of chocolate products without JAKIM halal

certifications from different perspectives such as the chocolate manufacturers, chocolate importers or retailers. Besides, as the results are based on a limited number of opinion leaders (Halal Management Unit Division of Sarawak Islamic Religion Department and Halal Industry Management, ACIS, UiTM Shah Alam and only one product (chocolate), further investigation using other products and opinion leaders from different department would be necessary.

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