

Research Group on Halal Product

Universitas Gadjah Mada

Vision:

To become a research center on Halal products globally

Mission:

Performing research activities on halal matters, and forming a bridge between HRG-GMU, community, and certification bodies.

Research Focus:

1. Analytical method development for analysis:
 - * Pig derivatives
 - * Alcohols/Intoxicants
 - * Food/Products authentication
2. Instrumental Development
3. Product development
4. Non halal substitutes
5. Halal Products preference
6. Social studies on Halal System and Management

Facilities:

Laboratory system accredited by ISO 17025: 2005

Analytical Instruments:

Gas chromatography (GC) with several types of detectors

High Performance Liquid Chromatography (HPLC) with several types of detector

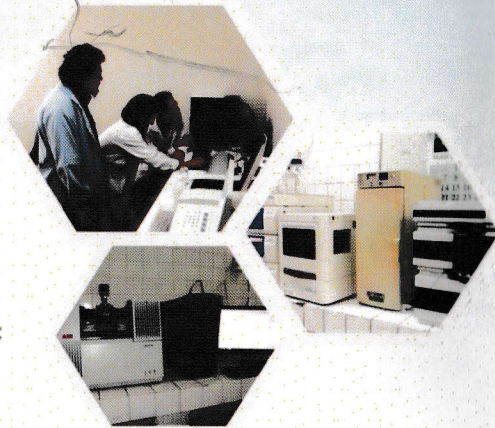
GC hyphenated with mass spectrometer

FTIR spectroscopy

Atomic absorption spectroscopy (AAS)

Electrophoresis

Polymerase chain reaction



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PROCEEDING

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Preface from Editor

On behalf of Editor, I am deeply grateful to all the reviewers who have been working very hard to review the manuscript submitted during “The 2nd International Seminar on Halalness and Safety of Food and Pharmaceutical Products” held in Integrated Research and Testing laboratory (LPPT), Gadjah Mada University, Yogyakarta, Indonesia on 17 – 18th October 2012.

We would like to acknowledge to keynote speaker, the Vice Minister of Religion Affairs and all distinguished invited speakers for the contribution. Furthermore, we also thank to steering committee for their advice and support. Finally I would appreciate to all participants, presenters and poster exhibitors as well as to sponsors.

Finally, we do believe that the presence of this proceeding will significantly contribute to an advanced scientific research in the field of halal products as well as in the field halal foods, cosmetics and pharmaceuticals.

Yogyakarta, March 2013,

Abdul Rohman
Editor





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Council was formed in 1999 in Jakarta. With the introduction of the halal certification standards and procedures compiled by Research Institute for Food, Drugs, and Cosmetics (LPPOM) Assembly of Indonesian Ulama (MUI) in few years later, Indonesia tries to promote a standard which can be replicated by other countries as a coherent yard stick for Halal certification.

Although there were already features in place to enable Indonesia to operate as the hub, more were still being developed, such as logistic infrastructures, institutional networking, advocacy skills and stakeholders' commitment in developing national halal industry. In forming policy networks, vision harmonization is needed between agencies to synergize the actions taken.

In reaching the objective of halal hub, some strategies were developed and prioritized by its urgency. The strategies developed are improving legislation and long-term policy development planning, creating halal champions, developing halal compatible logistics infrastructure, improving advocacy skills and networking trade cooperation, increasing mastery of halal industry research and development, improving coordination among government agencies and private sectors, increasing public awareness on halal industry and increasing local halal products competitiveness.

Moreover, setting up a global reference centre in halal knowledge and halal-related services such as fatwa know-how, information on halal certification, capacity building, business opportunities and incentives, as well as develop a global halal support centre for both investors and consumers, are no less important. Because a hub do not just address the needs for a globally recognized industry standard, it also served as a good platform for conflict resolutions facing the global halal industry at large, as well as provide for networking to encourage trade within the global halal market.

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Application of Polypeptide Molecular Weights in Gelatin Sources Differentiation

Nur Azira Tukiran¹, Amin Ismail^{1,2*} and Yaakob B. Che Man¹

¹ Laboratory of Halal Science Research, Halal Products Research Institute, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

² Department of Nutrition and Dietetics, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, 43400 UPM Serdang, Malaysia

Abstract

Gelatin is one of the most popular sources of food protein in food industries. It is mainly derived from either bovine or porcine sources because of their availability and attainable quality. Since, the source becomes a controversial issue for certain consumers, it is crucial to provide a simple and rapid method for differentiating the gelatin sources. The aimed of this study was to evaluate the practicability of using sodium dodecyl sulphate-polyacrylamide gel electrophoresis (SDS-PAGE) data for differentiating the sources of gelatins. Bovine and porcine gelatins exhibited clear differences at molecular weights ranged from 53 to 220 kDa, and these polypeptide molecular weights were stable under different heat treatments. In addition, there were similarities in the electrophoresis profiles of the jelly samples when the proteins were extracted with an acetone precipitation method. Such results indicate that polypeptide molecular weights have potential to be a biomarker for gelatin source differentiation.

Keywords: SDS-PAGE, porcine gelatin, bovine gelatin, heat treatment, acetone precipitation

1. Introduction

Gelatin is a mixture of polypeptides derived by partial hydrolysis of collagen commonly from bovine and porcine skin and bones. Gelatin is used widely in the food and pharmaceutical industries due to its unique characteristics. The source of gelatin has become an issue for certain consumers due to religious proscriptions (Regenstein *et al.*, 2003), the incident of bovine spongiform encephalopathy (BSE) disease, swine influenza and allergic reactions (Sakaguchi *et al.*, 1996). Thus the establishment of biomarkers or methods for gelatin species of origin determination may be useful. Recently, such a study was done to

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Development of Halal Hotel in Indonesia

Sulistyo Prabowo^{1,2}, Azmawani Abd Rahman², Suhaimi Ab Rahman², and Asnarulkhadi Abu Samah³

¹ Jurusan Teknologi Hasil Pertanian, Fakultas Pertanian, Universitas Mulawarman Samarinda

² Institut Penyelidikan Produk Halal, Universiti Putra Malaysia

³ Fakulti Ekologi Manusia, Universiti Putra Malaysia

Abstract

Tourism becomes one of the main priorities in The Masterplan for Acceleration and Expansion of Indonesia Economic Development. This sector is believed can increase workforce absorption, promote equal employment opportunities, achieve equitable national development, contributes to the foreign exchange revenues and supporting poverty alleviation efforts. The government endeavor in promoting Indonesia's tourism overseas has attracted many tourists from around the world. As a result the numbers of inbound and outbound Muslim tourist are also increase significantly from year to year. Consequently they need facilities and accommodation that meet their belief as a Muslim. This article intends to discuss critical issues in halal development for tourism industries especially in hotel and restaurant sector in Indonesia.

Keywords: Halal, hotel, tourism, Indonesia

1. Introduction

In order to realize the vision as a developed and prosperous nation by 2025, Indonesia is determined to accelerate the economic transformation. Therefore, Indonesia prepared Masterplan Pengembangan dan Perluasan Pembangunan Ekonomi Indonesia (MP3EI, The Masterplan for Acceleration and Expansion of Indonesia Economic Development). MP3EI is an integral part of the existing national development planning system. It directive is aimed at implementing the 2005-2025 Long-term National Development Plan, which is stated in the Law No.17 Year 2007, the vision of the acceleration and expansion of Indonesia's economic development is to create a self-sufficient, advanced, just, and prosperous Indonesia (Coordinating Ministry for Economic Affairs, 2011).

To support the acceleration and expansion of economic development in Indonesia, the Government has set a number of major programs in collaboration with key stakeholders including government ministries and the private sector in the development of MP3EI. Based on stakeholders' agreement the focus of development was classified into 8 main programs, i.e.: agriculture, mining, energy, industrial, marine, tourism, telecommunication, and the development of strategic areas. The eight main programs consist of 22 main economic activities where food-beverages and tourism are among them.

The food and beverage industry is a significant contributor to the GDP of Indonesia. In 2008, the industrial production value of food and beverage reached USD 20 billion, and has grown at an average of 16 percent every year thereafter. This industry absorbs the largest labor force among other manufacturing industries. In 2010, this industry absorbed a labor force of 3.6 million people, an increase of 3.8 percent from 2009. From January to August 2010, the food and beverage industry increased its export value by 16 percent for the food industry and by 13 percent for the beverage industry relative to the same period in the previous year.

In the tourism development program, the services industry has a strategic role to increase workforce absorption, promote equal employment opportunities and achieve equitable national development. It also contributes to the foreign exchange revenues and poverty alleviation. The increasing number of foreign tourists visit in 2010 has consequently increased the value of tourism's contribution in the amount of USD 7.6 billion compared to the USD 7.3 billion in 2008. The National Tourism Development Master Plan 2011 - 2025 targets foreign tourists visit will increase to 20 million per annum by 2025.

If we assumed that all tourists who come from the country with the Muslim majority population are Muslim, then it is estimated around 21.81% tourist in Indonesia need halal assurance for their accommodation during stay in Indonesia. It is also important to note that high percentage of tourists in Indonesia come from local/domestic. In 2010 the local tourist account for 122.3 million (Sari, 2011). As part of the biggest Muslim population country, they also need halal food and accommodation for their leisure.

The promising development of tourism sector in fact does not in line with its ability to anticipate the world new rising paradigm such as halal business and halal tourism. Not much hotel and restaurant in Indonesia as the main support in tourism industry comply with halal assurance system. According to Lembaga Pengkajian Pangan, Obat-obatan dan Kosmetika Majelis Ulama Indonesia (LPPOM MUI, The Assessment Institute For

Food, Drugs, and Cosmetics-The Indonesian Council of Ulama) less than 10% restaurant already halal certified in Indonesia (Sari, 2011).

2. Islam and Tourism

The development of tourism is widely recognized practiced in western countries, mostly non-Muslims countries. Thus a variety of issues related to tourism is always synonymous with the western lifestyle. This often appears among the Islamic resistance to develop tourism because of fears of bad influence of western culture against Islamic values they hold (Sanad *et al*, 2010).

Islam viewed tourism in a very comprehensive way. In the Qur'an found some verses that encourage Muslims to do travel (tourism). However, it should be emphasized that the tourism in Islam should have goals that do not conflict with its teachings.

"Travel through the land and observe how He began creation, then Allah will produce the final creation [i.e., development]. Indeed Allah over all things, is competent." (Al-Ankabut 29:20).

"Travel through the land, then observe how was the end of the deniers." (Al-An'am 6:11)

"Have they not traveled through the land and seen how was the end of those before them? Allah destroyed [everything] over them, and for the disbeliever is something comparable." (Muhammad 47:10)

In these series of verses imply that the main purpose of travel (tourism) is to think about and consider how God's creation (search for knowledge) and used to preach, to introduce Islam to everyone. This is also done by earlier Muslims to travel to find and develop knowledge as well as trade purpose (Sanad *et al*, 2010).

A concrete example of tourism practices in Islam that even been done long before teachings of the Prophet Muhammad is pilgrimage to Mecca. In fact, this practice became one of the pillars of the five pillars of Islam that must be carried out by Muslims.

Development of the tourism industry has always been associated with entertainment and pleasure. It is not forbidden in Islam as the Prophet Muhammad once told his people to entertain themselves as long as not violating the rules of Allah (Sanad *et al*, 2010).

"Have fun, have a good time and enjoy yourselves because if the heart is bored or fatigued, it could not be good." (Hadith Ibn Majah)

"Your body has a right on you, your soul has a right on you, your wife has a right on you. So you must give every of these their rights." (Al Bukhari)

In relation to non-Muslim tourists, Islam also teaches to treat them well. "Allah does not forbid you from those who do not fight you because



of religion and do not expel you from your homes- from being righteous toward them and acting justly toward them. Indeed, Allah loves those who act justly. "(Al-Mumtahanah 60: 8)

3. Halal Hotel

As mentioned above that Islam put the issue of halal and haram in every aspect of human life. Development of the tourism sector cannot be separated from this issue. In some literature, shelter and food is the most important thing on which one's judgment in choosing a destination (Bon & Hussain, 2010). Attitudes and actions are strongly influenced by background and experience that happened, including religious and cultural factors. Some studies indicate that decisions to buy / consume a product heavily influenced by one's religion (Ateeq-ur-Rehman & Shabbir, 2010; Lada et al, 2009; Bonne et al, , 2009; Just et al, 2007). Likewise, for Muslims, they require what is consumed must be in accordance with the teachings of Islam that is halal and thayyib.

According to economic theory of supply and demand in tourism, the high population of Muslims to travel today requires the availability of halal facilities for their needs during the trip. In terms of provision of services, it is still very limited food service providers such as hotels and restaurants, catering planes, trains and ships, food stalls, canteens, and other aspects that meet halal (Bon & Hussain, 2010).

For Muslims who are very concerned about halal, then looking for hotels and restaurants is a problem that would interfere their pleasure of enjoying the trip. Ab Rahman, et al. (2009) highlight three things that must be considered in developing tourism in accordance with the provisions of halal. They are the hotel, catering, and tour package services that meet the criteria halal friendly. Hotels are required only to provide halal food that has been halal certified, providing facilities that are separated between men and women, as well as supporting facilities like masjid for daily prayer, Qur'an, prayer time and Qiblah direction in each room.

According to Ishak & Ab Manan (2012):

"shariah compliant hotels should consider three aspects in offering their products and services; the man powers involved the physical facilities and also the obligation (*taklif*) of a Muslim entrepreneur. The human resources should conform to the tenets of Islamic law for instance in their dress code as well as their hospitality as hosts. The physical facilities such as serving *halal* food, no alcohol and extending to other facilities such as providing separating gymnasium, sauna, swimming pool and comfortable praying area. The obligation of a Muslim entrepreneur includes the financing mode of the hotel should be free from any interest based

instruments as *riba'* is prohibited in Islam. Apart from that, the operator should be aware of the obligation of paying *zakat* (one of five pillars in Islam which requires a person to pay 2.5% of his own wealth which fulfils certain conditions specifically for eight categories of people in need as listed in the Quran) and the entrepreneur should adhere to Islamic business principles. These are the comprehensive explanation of hotels to be *shariah* compliant".

Samori & Sabtu (2012) summarized criteria for the Shariah-Compliance hotel or Halal Hotel which had been proposed by some of Muslim writers are as follows:

"a) Halal foods and no alcohol to be served in the premises or hotels, b) having the Holy Book Quran, prayer mat and arrow that indicating the direction of qiblah, c) beds and toilets positioned not to face the qiblah, d) prayer room available in the premises and hotels, e) no inappropriate entertainment, f) predominantly Muslim staffs with a proper Islamic code of dressing, g) separate salon, recreational facilities and swimming pool for men and women, h) separate room/ floor for unmarried couple between male and female, i) tourists dressing code, j) no gambling and alcohol drinks in the hotel lobby or restaurant, and k) no prohibited foods and beverages in the hotel fridge."

4. Halal Hotel, Malaysia's Experience

In many ways, Indonesia shares the same characteristics to Malaysia. Historically both countries are descending from the same root. To develop halal hotel in Indonesia, it is better to draw lesson learn from Malaysia.

The development of halal issues in Malaysia is well recognized faster than any other countries in the world. This is in line with their target to become a global Halal Food Hub by 2010. In 1982, Malaysia establish Department of Islamic Development (JAKIM) under the Islamic Affairs Division of the Prime Minister's Department with the responsibilities to ensure and inculcate halal awareness among food producers, distributors, importers including food services in premise, restaurants and hotels (Samori & Sabtu, 2012). Due to that, to serve Malaysia as an international hub for the halal industry, the Halal Industry Development Corporation (HDC), was established on 18 September 2006 with the objective of coordinating the overall development of the halal industry in Malaysia for both domestic and international markets. HDC is agency under the ministry of international trade and industry (MITI). According to the economic newsletter report on February 2012, HDC is projecting a 10 per cent growth in Malaysia's halal exports this year to RM 33 billion, or about six per cent of total exports. For the third quarter last year, the

corporation forecast RM 22.6 billion in halal exports while in 2010; the halal export industry was about RM 20 billion. It shows that the developments of halal industry as a new growth industry in Malaysia have given significant growth to GDP of Malaysia itself (Shariff et.al., 2012)

In Malaysia, tourism industry had been identified as the third contributor to economic growth. In the last two decades, tourists' arrival had increased tremendously from only around 5.5 million in 1998 to 24.6 million in 2010, an average of 14.9 percent annually within the last 20 years. It was found that tourism had contributed significantly to income growth (Tamat and Norlida, as cited by Ishak & Ab Manan, 2012)

Malaysia realized that tourism is next vast and lucrative sector in halal business. They have carefully developed strategies, prudent investment, creative marketing and high quality product in halal tourism. As a result, Malaysia is benefiting from the promotion that was carried out by the government (Samori & Sabtu, 2012). In the field of hotel and service industries, Ishak & Ab Manan (2012) analyzed that halal tourism attracted Muslim tourists and thereby contributing to better economic growth in Malaysia. They predicted halal tourism industry will increase up to 20% in the future years.

It has been significant growth to the hotel industry in Malaysia especially from tourist all over the world. Malaysia has been leading the way in the halal tourism industry and has been successful in trying to attract Muslim tourists from all over the world, especially the Middle Eastern travelers, by offering facilities in accordance with the religious beliefs of these Muslim tourists. More interestingly is the fact that currently, data on tourism in Malaysia had indicated an increasing number of Middle-eastern Muslim tourists from year to year. Samori & Sabtu (2012) connected the increasing number of Middle-East tourists by the booming of halal industry in Malaysia which one thing could attract them.

Despite halal friendly hotel development in Malaysia is ginger up, Samori & Sabtu (2012) indicate this trend only applies to 3 or 4 star hotels. For the 4 or 5 stars hotels seem to be difficult to comply with halal standard since they also provide western style part such as bar in the lounge. The other problem facing by Malaysia is foreign hotel which operate or owning by western countries and they totally do not have any opportunity or chances to run the business according to Halal and Islamic compliance.

5. Halal tourism and halal hotel in Indonesia

Indonesia is known as a country with largest Muslim population in the world. Population census data of 2010 showed that out of total 237.64 million inhabitants, 207.18 (87.18%) are Muslims (Central Bureau of

Statistics, 2010). This fact put Indonesia as a potential market as well as reliable producer of halal products. According to Bon & Hussain (2010) in year 2009, Asia became the largest market of the world halal food market (63%) in which Indonesia itself at 19% followed by the Gulf countries (11%), India (6%) and China (5%).

In term of Islamic culture and heritage, Indonesia have many interesting places to be visited stretch from Aceh in Sumatra Island in the west to the Papua island in the east. Islam spread in Indonesia through acculturation with local wisdom. Evidences of historical and archeological as a result of this unity are very unique and becoming tourist destination on the history of Islam. The history of Islam in Indonesia is interesting to explore, how Islam was reinterpreted and result a unique religion with little bit different with its origin.

Currently, Indonesia is not include in the 10 Muslim countries destination according to the World Tourism Organization. Countries on the list include Algeria, Iran, Malaysia, Turkey, Oman, Syrians, United Arab Emirates, Bahrain, Lebanon and Egypt. While the four Muslim countries which enjoy the popularity of western tourists are Morocco, Egypt, Turkey and Malaysia (Bon & Hussain, 2010). Indonesia even showed disinterest in the development of Islamic tourism market compared to neighboring countries such as Malaysia, Brunei and Singapore (Henderson, 2010).

Halal for a product must include the source and type of raw material, acquisition, processing methods, transport and storage (Riaz and Chaudry, 2004). For most sub-sectors within the tourism industry may be very difficult when it should apply the principles of halal production which are very strict. These difficulties can be caused by factors from both inside and outside. Factor inside the institutions that hinder their effort to meet halal standards is the lack of knowledge and awareness of the business in the tourism sector (Wan-Hassan & Awang, 2009). There are still many people who are directly involved in the food supply in the tourism industry do not know the ingredients that are forbidden in Islam, even though they are Muslims. It is also inseparable from the rapid development of food science and technology. From outside the institution, the absence of a halal standard that is recognized around the world led to confusion among businesses. Halal recognition they get from a certification body may not be recognized by institutions in other countries (Bon & Hussain, 2010; Wan-Hassan, 2007).

Predominantly hotel manager are in doubtful to apply *syariah* principles in their work. Beside worry of consumer refusal, it is also impossible to combine current hotel standard with halal standard without any adjustment. This notion is contradictory with study by Laila

et.al. (2012) which shows different fact. Some hotels in Indonesia who applied syariah are benefited from increasing room occupancies and consumers trust even though it has not been halal certified.

Until now the data on hotels which has received halal certification from the Majelis Ulama Indonesia (MUI) is still very little (1%) compared to the actual amount present (see Table 1).

Table 1. Halal certified hotel by MUI as at April 2012

Province	Number of star Hotel	Number of halal certified
West Java	199	1
Jakarta	162	0
Riau Island	8	8
Riau	69	1
South Sulawesi	58	0
East Java	90	0
Bali	199	5
North Sumatera	76	0
East Kalimantan	43	0
Nanggroe Aceh Darrussalam	18	0
Banten	46	0
Central Kalimantan	7	0
West Kalimantan	18	0
Central Sulawesi	3	0
South Kalimantan	32	0
West Nusa Tenggara	36	0
Jambi	20	0
Total	1084	15

Note: In the province of Lampung, Bengkulu, Jogjakarta, West Sumatera, Central Java, East Nusa Tenggara, Sulawesi, Papua, Gorontalo, Maluku, South Sumatera, North Sulawesi, West Papua, North Maluku, the Bangka Belitung data are not available.

Halal as the main domain in the religion of Islam is often interpreted narrowly to defeat the great potential of the economy and the fulfillment of an obligation for Muslims to consume only halal. Such concerns led to a variety of halal socializing which are not implemented in an optimal, integrated and sustainable way. MUI as an institution that issued halal

certificates is lack of support from the side of law enforcement and prosecution of various offenses relating to false claims of halal.

6. Conclusion

Tourism developments in the Islamic world shows a graph continues to rise. Muslim countries are potential market and very profitable if it cultivated with optimal way. Tourism development that is appropriate for Muslim travelers should be tailored to their needs. The Indonesian government should encourage the various stakeholders in the tourism industry to provide a range of halal friendly facilities to welcome tourists from different parts of the world's Muslims. This of course must be based on the spirit to protect Muslim consumers as their primary target market as well as the potential economic benefit of the market share that vast and keep open.

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Measurement of Halal Awareness Level on Fast Food at Jember's Moslem Community

Winda Amilia and Andrew Setiawan

Abstract

As the impact of the globalization, the global lifestyle quickly response as local culture. Foods that rapidly going popular are fried chicken, pizza, spaghetti, lasagna, etc. which that are well known as fast food. This study aims to measure the level of understanding of halal food products in the Muslim community in Indonesia, especially in the area of Jember. Also to measure the level of public awareness to consume halal products. This survey research using questionnaires as a tool to collect information from respondents. The object of this study is the fast food restaurants of the region Jember, namely California Fried Chicken (CFC), Kentucky Fried Chicken (KFC) and Pizza Hut (PH). The selection of this object as the third object is the product of fast food that popular to Indonesia. Based on 100 respondents, 95 respondents said that the halal products are very important in their life, and only 5 respondents said that the halal products are important in their life. From the questionnaire, only 20 respondents of those consumers who do checks on the halal label in that restaurants. While 80% or 80 other people who does not check at all. Among the 20% of respondents who checked the halal label, 70% or 14 of respondents said that they checked the halal label without any serious purpose. Jember muslim community have a lack awareness of halal product. They believe the product are sold nationwide are certified halal. Due to lack of awareness of halal products, the government must provide guarantee halal products, in order to save Moslem's rights in consume halal products not only rely on in terms of taste and packaging only.

Keywords: halal certification, fast food, Jember Muslim Community, consumer, halal awareness

1. Introduction

The world embraced the religion and beliefs, one of which was the religion of Islam. Different religious groups such A Muslims, Christians, Buddhists, and others have different beliefs. These religious commitment and beliefs influence the feelings and attitudes of people toward consumption (Jamal, 2003). Islam is a religion that is growing quite