

Halal aspect of dental materials

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Introduction

With the world being more globalized, *halal* aspect is rapidly becoming a major concern amongst Muslims worldwide. Previous concerns focusing on the *halal* status of meat-based products has now expanded to include personal care and cosmetic products, as well as pharmaceuticals and medical/dental consumables. 20% of Muslims are reported to be concerned about the *halal* status of their daily products (Hunter, 2012). The advent of technology, innovation, development and globalization has made it very likely for the Muslim individual's product to contain ingredients originated from prohibited (*haram*) sources. In Malaysia; a Muslim-majority country, 40% of the population use *halal* pharmaceuticals (Ting *et al.*, 2019).

Islamic principles outline the following for Muslim consumption: that all things are permitted (*halal*), with few exceptions that are not permissible (*haram*). *Halal* encompasses that the source of the ingredient /product should be permissible in nature and the method of slaughter must follow Islamic laws. Failure to comply with these basic requirements renders the product as *haram* (Cai *et al.*, 2012).

The Department of Standards Malaysia issues a standard *halal* logo for labeling of products authenticated as *halal* in the Malaysian market. Due to the stringent requirements for issuance and use of this logo, it provides *halal* assurance to consumers in the Malaysian and global markets. The logo serves as a trusted and credible symbol for consumers seeking *halal* products as per Shariah law requirements. Despite major progress being made in *halal* labeling and authentication in the food industry, the same cannot be said for pharmaceuticals. The ingredients and processes involved in pharmaceuticals manufacturing remain a grey area in *halal* authentication. Afifi *et al.* (2014) found that a majority of pharmaceutical products in the market did not fulfill standard *halal* requirements. Additionally, medicines have not undergone the same scrutiny as food when it comes to *halal* authentication and remains under-explored in practitioners and studies of medicine (Saha *et al.*, 2019).

Dental materials are another category of products that forego strict *halal* scrutiny. Most dental materials in Malaysia are imported and may contain ingredients with doubtful or *haram* sources, such as pig (Nadia *et al.*, 2016). Most dental materials only label active ingredients while leaving out important information on the excipient

content of the materials. This includes colourings, thickeners, diluents and flavorings. As the dental materials come into direct contact with patient's saliva and blood during various dental procedure, the *halal* aspect of these dental materials should not be taken lightly (Irfanita *et al.*, 2017).

An example of excipient in dental materials is alcohol which is forbidden in Islam. However, the prohibition of alcohol is due to its ability to intoxicate. Hence, non-intoxicating alcohols such as sterile alcohol are permissible for use, while intoxicating alcohols such as ethyl alcohol and methylated spirits and ethanol are prohibited. Furthermore, Islam makes allowances for use of prohibited materials if the ingredient is absolutely necessary to the function of the material and cannot be substituted with another ingredient (Muzakarah Jawatankuasa Fatwa Majlis Kebangsaan, 2011). Besides alcohol, another doubtful ingredient found in medical/dental/pharmaceutical products is gelatine, that derives from porcine sources. As a general rule, it is necessary for Muslims to seek the source of the gelatine before use. However, in dire cases, use of such products become permissible to preserve the life of the patient (Muzakarah Jawatankuasa Fatwa Majlis Kebangsaan, 1984).

The Malaysia Standard aims to fill in this *halal* gap by outlining Hazard Analysis and Critical Control Points (HACCP) and Good Manufacturing Practice (GMP) requirements that are Sharia-compliant to the food and pharmaceutical industries. The guidelines cover manufacturing, preparation, management and storage of products that have been labeled halal in accordance with government requirements. This certificate issue is especially critical when exporting Malaysian products for the world (Habibah *et al.*, 2008).

Efforts to educate doctors and patients with regards to the ingredients in dental materials needs to be enhanced. This is especially true for Muslims to protect their religious rights and beliefs and to protect the Ummah at large. While ongoing efforts have focused on social media posts, this

information can be inaccurate and unreliable, as regulation of information on social media is non-existent. Wrong/false information not only deviates one from the correct practice of Islam, but can also divide the Ummah. Thereafter, it is crucial that the *halal/haram* information obtained is disseminated in a cautious manner to prevent misunderstandings and divide in the Muslim community.

In conclusion, development of dental materials needs to fall under the scrutiny of *halal* authentication in order to protect the consumers' religious beliefs and health issues. Thus, there should be a conjoint effort especially among the Muslims to develop reliable and accurate methods towards achieving this objective.

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