

Halal Vaccines: Assessing the Framework of Mutanajjis and Istihalah

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Abstract: The discourse on Halal vaccines highlights the intersection of biopharmaceutical innovation and Islamic jurisprudence. Concerns over porcine-derived ingredients, *Najis* (impure) contamination, and the applicability of *istihalah* (transformation) have generated debates on vaccine permissibility in Muslim communities. This editorial examines the issues surrounding Halal vaccines through the framework of *mutanajjis* (contact with najis) and *istihalah*, assessing the implications for Halal status determination. A forward-looking approach that harmonizes scientific evidence with Shariah principles is essential for establishing global standards in Halal vaccine certification and fostering public confidence.

Article History:

Received: 11th November 2025
Revision Received: 15th November 2025
Accepted: 30th November 2025
Available Online: 26th December 2025

Keywords: Halal Vaccines, Biopharmaceutical, Mutanajjis, Shariah, Halal Industry

Citation:

Jamaludin, M. A., Has-Yun Hashim, Y. Z. & Rosli, N. L. I. (2025). Halal Vaccines: Assessing the Framework of Mutanajjis and Istihalah. *Journal of Halal Industry & Services*, 8(1), a0000629.

DOI: 10.36877/jhis.a0000629

1. Overview of Halal Vaccines

The idea of Halal vaccines has been discussed for several years, but there are still limited knowledge and little concrete data on their global production. In Malaysia, the legal determination of the applicability of a biopharmaceutical product, including vaccines, is usually based on two main concepts. The first is the concept of *dharurah* (emergency), which is an urgent situation that allows things that were originally forbidden to be used to preserve

(*Hifz*) the five main objectives of Shariah: religion (*al-Din*), life (*al-Nafs*), intellect (*al-Aql*), lineage (*al-Nasab*), and property (*al-Mal*) (Jaludin *et al.*, 2018). Based on classical views and current fatwas resulting from discussions among Islamic scholars and experts, the use of forbidden or impure substances in medicine and therapeutics is permissible if it involves the risk of losing life and there is no other halal alternative. The second is the concept of *istihalah*, which is the change of a substance from its original nature to a new nature that no longer returns it to its original state. In other words, something that was originally forbidden can become halal if it goes through a process of complete transformation (*istihalah tammah*) or partial transformation (*ghairu tammah*), depending on the level of transformation that occurs (Jamaludin *et al.*, 2012). A vaccine works by introducing an antigen that stimulates the immune system to prevent or treat disease (Ab Latiff *et al.*, 2021). In Malaysia, the Ministry of Health and the Department of Standards specify that vaccines registered with the Drug Control Authority (DCA) may consist of several types (Ab Latiff *et al.*, 2021). These include microorganisms that have been inactivated but still retain their ability to trigger an immune response, live microorganisms that are weakened yet effective, antigens derived from microorganisms or produced through recombinant DNA technology, and antigens synthesized chemically in laboratories (Department of Standard Malaysia, 2019).

Issues on Halal Vaccines

Several *fiqh* and technical issues arise in determining the halal status of biopharmaceuticals including vaccines. First, there are biopharmaceutical products that do not go through the full *istihalah* process, rather they are contaminated with impure substances. In this situation, the question arises about the method of purification when it is contaminated with *mughallazah* impurities. Is the normal washing method using water sufficient, or is it necessary to use a special method? The original material could be halal but is contaminated with impurities throughout the production process, raising questions about the purification procedure.

Second, issues arise regarding the basic nature of the biopharmaceutical itself, especially when it involves particles in the form of viruses or bacteria that cannot be seen with the naked eye. From a Shariah perspective, questions arise about the method of purification of these micro-elements and their status as living beings. This is related to the debate about whether viruses, cells, or bacteria are categorized as living beings such as humans and animals, or as entities that are different in nature.

Third, vaccines are essentially made from microorganisms or parts of microorganisms that cause disease. For instance, measles vaccine is from the measles virus, polio vaccine from

the polio virus, and smallpox vaccine from the smallpox virus. So, the question of law arises about the use of antigens or viruses taken from the body of a sick human. Is it still considered part of the human element, or has it changed into a new element that no longer carries its original law?

2. Concept of *Mutanajjis* and *Istihalah*

In Islamic law, *mutanajjis* refers to an object or substance that was originally pure but became impure due to exposure to or contact with impure substances (Salleh *et al.*, 2023). For example, clean water but mixed with impure substances, or equipment that has been exposed to impure substances such as blood or pork. The difference with original impure substances is that *mutanajjis* is not impure from the beginning but only becomes impure after being contaminated. In terms of Islamic law, the status of *mutanajjis* as pure or impure is determined by several factors, including the type of impure substance, the degree of contamination, and whether it can still be cleaned with the prescribed purification methods, such as washing with absolute water or the *sertu* (Islamic cleansing) method for *mughallazah* impure (Imron & Muallifah, 2025). In the context of vaccines, the concept of *mutanajjis* becomes an issue when the original halal or pure material is contaminated with impure substances during the production process (Alias *et al.*, 2020). The question arises as to whether it can be repurified or continues to be considered impure, and this is where the discussion about the validity of the *istihalah* process and purification methods plays an important role.

The term *istihalah* literally means transformation from one state to another. In Islamic jurisprudence, it refers to the process by which something impure (*najis*) becomes pure (*tahir*) after undergoing a change or transformation (Jamaludin *et al.*, 2012). This transformation, often observed in nature, is recognized in fiqh as one method of purification (Amin & Gunay, 2023). Some contemporary scholars relate *istihalah* to chemical reactions, but classical sources suggest that not every reaction qualifies. Instead, a valid *istihalah* requires a complete change in the substance's structure and qualities, producing something entirely different from the original material. Examples include decomposition of materials into basic elements or changes such as evaporation. Scholars also emphasize that the resulting product must be so transformed that its origin is no longer identifiable (Amin & Gunay, 2023).

3. Assessment of Halal Vaccines Through the Lens of Proper Halal Determination

Halal determination of vaccines demands a holistic approach that integrates both Shariah and science. This requires comprehensive evaluation of raw materials, production processes, and the degree of transformation in line with the principles of *istihalah*. Halal certifying bodies must collaborate with scientists to establish robust, evidence-based guidelines for assessment. Transparency and public education are equally critical in addressing misconceptions and building trust among Muslim consumers. By adopting such a framework, the global pharmaceutical including biopharmaceutical industry can be encouraged to prioritize Halal compliance as part of its research and development agenda.

Conclusion

Advances in science and technology have opened up great opportunities in resolving various medical issues including vaccine development. However, determining the Halal status of pharmaceutical products must always be viewed from an integrated perspective of scientific and Shariah perspective. Basically, the Halal assessment of a product includes three main aspects: the use of raw materials, processing methods, and the status of the final product. Each of these aspects must meet the Halal requirements, be free from haram or impure elements, and be developed with the aim of providing benefits without harm. In this regard, careful scientific assessment needs to be combined with the views of jurists to produce clearer guidelines in determining the Halal status of vaccines. Although many current fatwas use the concept of *dharurah* as the basis of necessity, the approach based on contemporary legal determination needs to be strengthened so that it does not only depend on emergency situations. Close cooperation between scientists, Islamic scholars, Halal certification bodies, and fatwa institutions is very important to ensure the production of vaccines that are truly Halal, reliable, and in line with the *Maqasid al-Shariah*, especially in preserving life (*hifz al-nafs*).

Funding: No external funding was provided for this research

Conflicts of Interest: The authors declare no conflict of interest.

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