

Halal Cleansing Operations towards Halal Integrity: A Literary Insight

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Abstract

This literary paper aims to provide an insight on halal cleansing operations towards halal integrity in Malaysia. Halal logistics is an important activity to meet the demand from the halal manufacturers to maintain integrity of their halal products supply chain. Halal cleansing operations is to ensure halal integrity is assured for the Muslim customers. However, the adoption of the halal cleansing operations in Malaysia is relatively low. Therefore, this study explores the literary review of the halal cleansing operations process, its related policies and procedural requirements, as stated in the Malaysian Standards MS2400:2010 for halalan-toyyiban assurance pipeline, or known as the halal supply chain management. Halal cleansing operations is significant for halal integrity implementation in the halal logistics' equipment not only through compliance of the MS2400 requirements but more so with in-depth understanding and observance of the Shariah requirements. In summary, the knowledge and literature on halal cleansing or sertu operations can be used as a reference for the halal authority, halal logistics service providers and researchers in halal logistics and supply chain management.

Keywords: Halal logistics; Ritual cleansing; Sertu; Halal integrity

1 Introduction

Halal simply means “things or actions permitted or lawful” by the Shariah laws. So when we are talking about halal foods it means any foods that are allowed to be eaten according to Islamic Shariah law. This means that for any food to be considered halal it must comply with the religious ritual and observance of Shariah law. The term halal covers and designates not only for food and drink but also all matters of daily life. Halal is one of five *الأحكام الخمسة* (al-ahkam al-khamsah) requirements: *fard* (compulsory), *mustahabb* (recommended), *halal* (allowed), *makruh* (disliked), *haram* (forbidden) — that define the morality of human action in Islam. *Mubah* is also used to mean “permissible” or “allowed” in Islam. Generally in Islam, every object and action is considered permissible unless there is a prohibition of it in the Islamic scriptures. Clarification is given below in detail as to what is considered to be a permissible object or action in Islam, along with the exceptions.

The terms halal and haram distinguishing the lawful from the unlawful respectively refers to matters stated under the ‘Islamic law’ known as the Shariah (Al-Shariah) which is a moral system of living that governs every aspect of a Muslim life. Shariah refers to the body of Islamic laws which deals with many aspects of Muslims day-to-day life from food, hygiene, family, politics, banking and business (SIRIM, 2015).

The Islamic religion places strong emphasis on cleanliness (toyyiban) – both spiritually and

in the context of food and drink. For a food and drink product to be approved for consumption it must conform to the Islamic dietary laws as specified in the Quran, the saying of Prophet Muhammad, his Sunnah (tradition) and in Fiqh (understanding) of the Islamic Jurists. With reference to the Malaysian MS1500: 2009 standards, Shariah laws is the Orders of Allah which relate to the action of the people who are being accountable (mukallaf) by obligations, options or *al wadhu* (MS1500: 2009). Thus, halal management governs not only for food production or manufacturing but halal management also covers sourcing or origin of raw materials (halalness), the movements, transportation and distribution processes from the upstream (origin) and downstream to the market (end users) that involves transporters, containers, modes by road, air or sea, the warehouse and distribution centers owners and operators and their operations; the wholesalers and retailers and their business to the end in hypermarkets, supermarkets and small retail outlets services must be halal compliance. This refers to halal supply chain management.

2 Halal Supply Chain Management

Halal supply chain is created by the halal supply chain providers to meet the demand from the halal food manufacturers. It has not only attracted food industry practitioners to practice and comply with the halal concept, but other sectors such as cosmetics, pharmaceutical, health care products; and also academicians and researchers from institutions of higher learning also need to know and understand the halal supply chain in order to support halal integrity of the halal products. According to Ngah, Zainuddin & Thurasamy (2014), the activities in the halal supply chain are warehousing, sourcing, transport, handling and delivery of halal products, inventory management and other business management strategies such as lean management and values-based management.

Halal supply chain management also refers to the process of managing the procurement, movement, storage and handling of materials, parts, livestock and semi- finished inventory, food and non-food, and related information together with documentation flows through the organization that comply with the general principles of Shariah Law (Bahrudin, Illyas, & Desa, 2011). Additionally, halal supply chain adopts the conventional supply chain but with the additional of imposed Syariah law requirements. The imposition of the Islamic laws in supply chain management acts as the basic requirements for a Shariah-based halal management process: meaning everything must be halal (permissible) and also *toyyib* along the whole chain (Omar, Jaafar, & Osman, 2012).

Recapitulating, *toyyib* or *toyyiban* refers to clean, hygiene, safety and wholesomeness (MS2400: 2010). Malaysia is world respected in pioneering halal supply chain management standards which is the MS2400 Halal Assurance Pipeline Standards (Department of Standards Malaysia, 2010) shown in Table 1. In fact, Malaysia is also the global pioneer in halal certification system. JAKIM (Department of Islamic Development Malaysia) is worldly recognized as the leading authority on matters relating to development of halal policies, halal certification processes and auditing standards with collaboration of Department of Standards Malaysia (JAKIM, 2012).

Table 1. MS2400: 2010 HTAP Standards

Malaysian Halal Standards MS 2400: 2010	
MS 2400-1: 2010 Part 1	Halalan-Toyyiban Assurance Pipeline: Management System Requirement for Transportation of Goods and/or Cargo Chain Services.
MS 2400-2: 2010 Part 2	Halalan-Toyyiban Assurance Pipeline Management System Requirements for Warehousing and Related Activities.
MS 2400-3: 2010 Part 3	Halalan-Toyyiban Assurance Pipeline Management System Requirements for Retailing.

Source: MS2400: 2010, Department of Standards Malaysia (2010).

This literature paper shall focus and deliberate only on halal transportation and halal logistics – Part 1 of the standard.

2.1 Halal Logistics

Logistics is described as all activities which facilitates movement and the coordination of supply and demand in the creation of time and place utility (Haskett et al., 1973). Logistics is also defined as the process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from point of origin to point of consumption for the purpose of conforming to customer requirements (Lambert et al., 1998). The purpose of logistics is to ensure that customers are able to enjoy, use or consume the products at the right time, at the right quantity, right description and in good condition. Therefore, logistics management involves a series of activities namely transportation, storage and warehousing, inventory management, material management, product scheduling and customer service.

Logistics plays a key role in protecting the quality and conditions of any food product through proper transportation, storage, and handling within the supply chain, until it reaches its final destination (Tieman, 2008). The main success of the halal industry relies heavily on logistics service management capabilities in ensuring the integrity of halal products. All halal products must comply with the Shariah law which states that products must be safe, not harmful and wholesome right from the origin until final consumption. Tieman (2011) again reemphasized the distribution, storage, handling and procurement of halal products must follow the Shariah principle in order to be considered halal.

The main element that ensures halal products remain halal is when these halal products reach the consumers is transportation and logistics. The basic principle of halal transportation is to ensure physical segregation of halal cargo from non-halal cargo in transport. This is to avoid possibility of cross-contamination; to avoid the possibility of making mistakes and to ensure the transportation system meets the expectations of the various Muslim consumers throughout the world (IHIAS, 2009). Kamaruddin et al. (2012) added on by mentioning the consumers' consumption trends are not only towards halal products but also halal logistics. Thus, adopting halal into logistics context, the halal products must be ensured its halalness during and throughout all logistics activities that are specifically: transportation, storage and warehousing and retailing too must adhere to Shariah principles as a whole.

Zulfakar et al. (2014) and Che Man et al. (2007) describe halal logistics as similar to conventional logistics activities, comprising of planning, implementing and controlling the distribution and storage of halal certified products from the source to the point of consumption. To ensure a complete practice of halal logistics, Lodhi (2009) stated that during key stages in logistics and supply chain activities, all halal products must be protected from non-halal products or substances until it arrives at the final destination. However, there is high tendency of

halal products may be cross-contaminated during stuffing and delivering due to the transport or containers being contaminated (Zulfakar, Mohamed Anuar & Ab Talib, 2012). The potential of cross-contamination can or may happen when the halal product may have or come into physical contact with non-halal substance of previous delivery by the same transport which results in the halal product becomes haram or non-halal. The same goes to the container usage that carries a halal product but is affected by the previous non-halal element in the said container or transport vehicles. Hence, halal logistics competencies and Shariah-cum-technical know-how are crucial in order to maintain the integrity of halal products.

2.2 Halal Integrity

Halal logistics requires a process approach, where processes and procedures have to be clearly documented as proof of a halal logistics system (Tieman, 2013). Although an established and well-documented halal logistics system should be able to prevent contamination from occurring, proactive corrective measures will need to be defined to mitigate or at least minimize the risk of contamination on halal products; and business strategies to address the perceptions and sensitivity of the Muslim consumers.

The main objective of halal logistics is to ensure the halal integrity of halal products for the end-consumers (Tieman, 2013; Jaafar & Muhammad, 2014). Integrity itself carries the meanings of the state of being whole and undivided. Integrity means the quality of being honest and having strong moral principles; moral uprightness. Integrity is synonymous with solidarity, coherence and cohesion, highly ethical, truthfulness and trustworthiness (Dictionary.com, 2015). Hence, halal integrity in halal logistics and halal supply chain means to uphold the state of halal for the foods and cargo; and *toyyib* for the manner the foods and cargo being handled and delivered along the supply networks by the service providers from transporters, warehouse operators and retailers and the man himself who are ethical, truthful and trustworthy in carrying out their operations and system of works that industry. And this is in line with the Shariah *maqasid* principles (Objectives of Shariah) are for the preservation of the 1) religion; 2) life; 3) intellect; 4) progeny and 5) property (SIRIM, 2015).

Halal integrity is the assurance of the halal products particularly for halal food industry. Protective and preventive measures must be taken to ensure that the halal products still remain halal even throughout the transportation process within the supply chain (Tieman, 2013). Thus, halal supply chain management assures halal integrity is secured from the source (origin) to the point of consumer purchase (end). This means halal logistics plays a crucial role in halal supply chain management in connecting the individual suppliers, supplier of suppliers, customers, customers of customers to the final consumers: thus creating a halal supply network (IHIAS 0100:2010); however the halal integrity in the halal supply chain has yet to be assured in the industry and its logistics practices.

Sungkar, et al. (2008) interprets halal integrity means that the products are being sourced, produced, processed, stored and distributed in a manner coherent with the Islamic values, where these are in line with modern and universal values such as high quality and safety, hygienically produced with respect for animal welfare and fairly traded. Zulfakar, et al (2015) highlighted and quoted: “halal food products now travelled greater distance and involved a lot of handling before it reaches its final point of consumption. This situation has created uncertainty regarding the authenticity of the halal status and whether the food products still remains halal. Therefore, it is a big challenge for all the parties involved to ensure the integrity of the Halal product is intact throughout the whole supply chain”.

Lodhi (2009), Khan (2009) and Tieman (2011) mentioned in Zulfakar, et al (2014) whom the latter researcher also concurred that halal integrity assurance is the key factor in developing a well trusted halal food supply chain in the current complex and competitive environment.

These researchers also posited the challenges for halal integrity lie ahead due to variations in the definitions of halal; unavailability of single, worldwide halal standards; and lack of comprehensive understanding of the whole halal food supply chain. Hence, all the parties involved must be committed with every possible action to protect the integrity of the halal supply chain.

On the other hand, Talib et al. (2013) claimed factors that hindered halal logistics adoption were due to: insufficient government support, collaboration issues among logistics service providers, lack of knowledge on halal issues such as safety and cleanliness of transport and containers, and the perception of additional and increase in operation costs. Zulfakar et al (2015)'s study concluded with seven identified factors affecting halal integrity as: 1) halal certification; 2) halal standards; 3) halal traceability; 4) halal dedicated assets; 5) trust among supply chain members; 6) commitment of supply chain members; and 7) the role of government. However, both studies do not address contaminations as one of the causal factor that may affect halal integrity.

2.3 Contamination as Causal Factors

Contaminant carries wide and varied definitions with respect to the field or sector that applies. Contaminant(s) can be in the form of solid, liquid or gas; natural or artificial or synthetics; visible or invisible to the eyes, traces or minute such as microbes or micro-organisms; odour or odourless; it can be an element, a compound, a mixture, a place, a substance, a process, an activity or a reaction that are intentionally or unintentionally causing directly or indirectly 'adulterating' or affecting the original nature or state of a process; a medium; or an environment. Contaminants can also be derived from the interactions or a combinations of all the above; contaminants can be embedded, ingrained, mixed, cultured, tainted, or in contact superficial on/with a surface or otherwise.

Contamination is the act of contaminating; or of making something impure or unsuitable by contact with something unclean, bad as by making it unsuitable, harmful, or unusable (Doctinary.com, 2015). In the context of halal supply chain and halal logistics, contaminants are any non-halal or detrimental (*mudhorat*) substances that are intentionally or unintentionally added which render the halalan products as non-halal (MS2400: 2010).

Contamination refers to the state of being in contact, infected, adulterated by contaminants or precursors that violates the Shariah laws (Mohd Shariff, 2015). Contamination is the state of being contaminated in terms of Shariah perspectives, either by contaminants or precursor which affects the halalan toyyiban status (MS2400: 2010). Hence, the presence of contaminants in the halal supply chain operations and its activities poses a probability or likelihood of exposure to cross contamination to the halal products; thereby causing the halal products to be contaminated and hence haram and non-halal. Therefore, the contaminants in halal logistics and supply chain that are prevalent are najis and potential precursors that may exist possibly in the transport and containers that are formerly carrying non-halal products; traces of contaminants that originate from the non-halal products due to a combination of factors (environment, temperature, humidity, air pressure, quality of air), or human handling at the warehouses operations and also at retailing end.

2.3.1 Najis (Najis; Filth)

In Islamic law, najis or najis (Arabic: نجس) are things or persons regarded as ritually unclean (Encyclopaedia of Islam, 2015). Najis is a contaminant; that is things that are physically not clean because of their characteristics. Malaysian MS1500: 2009 and MS2400: 2010 standards categorized najis with the latter standard providing more explicit description of the najis as

shown in Table 2.

Table 2. Definition of Najs (*Najis*)

Definition of Najs (Najis; Filth)	
MS1500: 2009 Halal Food – Production, Preparing, Handling and Storage – General Guidelines	MS 2400: 2010 Halalan-Toyyiban Assurance Pipeline Part 2: Management System Requirements – Part 1: Transport and Cargo Activities Part 2: Warehousing and Related Activities Part 3: Retailing
a. Dogs and pigs and their descendents;	a. Materials and animals that are themselves not permissible such as dog and pig; and all their derivatives, blood and carrion;
b. Halal food that is contaminated with things that are non-halal;	b. Materials that are contaminated with materials or animals that are najis;
c. Halal food that comes into direct contact with things that are non-halal;	c. Materials that come into direct contact with things or animals that are najis;
d. Any liquid and objects discharged from the orifices of human beings or animals such as urine, blood, vomit, pus, placenta and excrement, sperm and ova of pigs and dogs except sperm or ova of other animals;	d. Any liquid and objects discharged from the orifices of human being or animals such as urine, placenta, excrement, blood, vomit and pus; and
e. Carrion or halal animals that are not slaughtered according to Shariah law;	e. Carrion or halal animals that are not slaughtered according to Shariah laws.
f. Khamar and food or drink which contains or mixed with khamar (alcoholic beverages and intoxicant.	

Source: MS2400: 2010 Halalan-Toyyiban Assurance Pipeline (Department of Standards Malaysia, 2010).

Table 3 further depicts the three types of najis (filth) as stated in the MS2400: 2010 standards.

Table 3. Types of Najs (Najis/Filth)

Types of Najs	
a. Mukhaffafah (Light)	Light najis is urine from a baby boy at the age of two years and below who has not consumed any other food except his mother's milk.
b. Mutawassitah (Medium)	Medium najis which does not fall under severe or light najis such as vomit, pus, blood, khamar, carrion, liquids and objects discharged from the orifice.
c. Mughallazah (Severe)	Severe najis which are dogs and pigs including any liquid and objects discharged from their orifices, descendants and derivatives.

Source: MS2400: 2010 Halalan-Toyyiban Assurance Pipeline (Department of Standards Malaysia, 2010).

2.3.2 Precursors

Precursor or its common layman term is predecessor in operations or activities refer to a person, animal or thing that precedes (that goes before) as in a job or a method for an example. Precursors are dominant in chemistry and food processing where a chemical that is transformed into another compound, as result of a chemical reaction; and therefore precedes that compound in the synthetic pathway (Dictionary.com. 2015). In the context of halal logistics and supply chain, precursor or potential precursor is the result of activity(s) of halal substance(s) not intended as part of the product that may affect the toyyiban status and intended use of the product. Examples genetic modified organism (GMO); prior effects of chemicals/colouring/preservative/additives reactions that may cause harm to food, health and human consumption.

The probability of contamination(s) may occur at any stage along the halal supply chain process and also during the transportation, warehousing and retailing operations (Omar, Jaafar & Osman, 2013). The likelihood of contamination during transportation and handling, modes and means of transport, transits, bulk breaking process and transhipments are possible; and that depends of the probability of exposure, duration of contact, and frequency of exposure to the contaminants or najis' and its severity effects (as result or resultant effects) onto the halal goods being carried (Mohd Shariff, 2015). This is synonymous with potential hazards and risks in managing occupational safety, health and environment aspects in a workplace (Mohd Shariff, 2012).

2.3.3 Contamination in halal logistics

Precursor or its common layman Reiterating, contamination may occur at any stage during and in transportation, containerization processes, handling and receiving processes at loading or unloading (receiving bays), activities and works done in the warehouse itself that is subjected to the environment, temperature, lighting, humidity, air pressure and air quality and also during the warehousing processes such as open, bulk and unbulk, stacking, storage, etc.

It is also not only the transport vehicles that must ensure the ḥalāl integrity of the halal shipment and cargo, but the containers or carriers also play a significant role in maintaining ḥalāl integrity and cleanliness that must adhere to Shariah Law (Tieman et al., 2012). Contamination or precursors may happen in the transport and containers that are carrying non-halal and harm products with halal products and without segregation. Quoted “the slightest presence of a ḥaram substance will annul the halal status of transportation and containerization; thus necessitates a separate transportation fleet in order to minimize and avoid any potential cross-contamination” (Tieman, 2012).

Contaminations and degradation of halal products are crucial in halal logistics operations that warrants detailed halalan-toyyiban risk management plan to identify all possible risks of contaminations from the water and raw material sources; premise, work place, air quality, environment and layouts; equipment, containers, facilities, wastes and disposal management; human health, personal hygiene and sanitary; pest control management and processes critical control points (MS1500: 2009; MS2400: 2010).

In the event of contaminations do occur, the logistics operations need to be prepared for remedial preventive and corrective actions to assure halal and Shariah compliances. The control mechanisms are the Shariah ritual cleansing procedure; and the detailed HTRMP (Halalan Toyyiban Risk Management Plans) that address all possibility of contaminations and critical control points being in placed to mitigate contaminations and to assure halal integrity (Mohd Shariff, 2015).

Contaminations may also happen from the product characteristics itself such as frozen meat and chilled milk and dairy products due to the presence of chemical, physical and biological hazards that are present in the food product. However, this paper shall deliberate only on contaminations with najis that are mentioned in Table 1 and the preventive measures to be taken are to carry out cleansing operations or *sertu* to ensure halal integrity in transportation and containers.

3 Cleansing Operations towards Halal Integrity

The halal transport, containers and trucks require ritual cleansing and cleaning to remove traces of an earlier non-halal or unknown shipment to mitigate possibility of contamination and najis. What and why ritual cleansing and its difference with cleaning in halal logistics; and what is its relevance to halal integrity in halal logistics?

Cleaning in simple term refers to an activity, action, process or procedure to make a work station, an office or a warehouse; or an object such as ornament, a computer, a machine and a lorry/container to mention a few free or removed from dirt, dusts, grimes, oils, stains, litters or any contaminants that are present. Cleaning activities that are most commonly carried out is sweeping, dusting, scrubbing, vacuuming, washing, to mention a few ...as it depends on the objects to be clean, the types and degree of stains and the medium or agent of washing. The common medium or agent used for washing is water as this is easily accessible, cheap and natural; however, stubborn stains, oily and chemicals, and contaminants require appropriate chemicals and agents to remove them. Hence, this cleaning concept applies to halal logistics and halal supply chain as all equipment, transportation, warehouse must be clean and with good housekeeping to ensure clean, neat, tidy and orderly; this is synonymous as humans need to clean oneself for personal and health hygiene to work. Thus all Malaysian halal and food standards state mandatory requirements for premises, infrastructure, facilities and personnel to maintain, clean and where appropriate to disinfect to avoid contamination of all sorts for halal integrity and cleanliness (*toyibb*) (MS2400: 2010).

On the other hand, *cleansing* generally refers to a more thorough and detailed clean (verb) (Life Happenstance, 2014). *Cleansing* is somewhat more than just cleaning as it involves elements of purification, spiritual and religious values and faith; for example cleansing the human body by taking *ablution* – washing the body parts (e.g.: face, hands, ears and legs) with water with religious motive/faith citing specific Islamic verses. *Cleansing* may also mean cleaning that requires specific procedures or procedural steps that requires rigor and specific cleaning agents or chemicals/substance; for example a surgeon must do hand scrubbing or cleansing before and after carrying out a medical operation; or cleansing or sterilizing operating tools in the operation theatre. Likewise, people carry out ritual body cleansing in the river by smearing scented oils onto the body; and cleansing to remove negative energy and bad spirits in accordance with the religion and beliefs.

3.1 Shariah Ritual Cleansing

Cleansing aims not only to purify but also to filter and to remove all possible remaining traces of contaminants in total so as no evidence of contamination remains. Hence, ritual cleansing in halal logistics and transportation refers to *sertu*; and that ritual cleansing (*sertu*) is carried out in the transport, trucks and containers if there are evidences of severe najis contamination are present; or when one is in doubt (*syubah*) on the status of halal and cleanliness (*toyibb*) of the said containers and trucks.

Shariah ritual cleansing refers to removal of contaminants based on cleansing procedures in

accordance to the Shariah requirements as stipulated in MS2400 standards requirements. Shariah ritual cleansing protocol and procedures are outlined in accordance with Islamic rulings stated in the Holy Quran on precisely how ritual cleansing should be carried out to cleanse and purify all taints and contaminations from the three types of najas. MS2400 standards stipulate the Shariah ritual cleansing requirements in Clause 6.7; quote:

“Clause 6.7.1 – The organization shall ensure that Shariah ritual cleansing is performed when and where contamination by severe najas occurs.”

Sertu or Shariah ritual cleansing or purification cleansing is only for the cleansing that involves the highest level of impurity or *severe najas (najas mughallazah)* in Islam laws that concerns contamination (or in physical contact) from dogs, pigs and its descendant (Life Happenstance, 2014). Example, if a Muslim were in skin contact with a dog (its saliva) be it by accident or intention, the Muslim has to cleanse the part of contact by way of sertu.

3.2 Shariah Ritual Cleansing in MS2400 – Premise, Infrastructure, Facilities and Personnel

Halal logistics and supply chain operations and activities involve the use of transport, trucks and containers; premise that includes warehouse with its working, surrounding areas and infrastructure such as floors, loading bays, storage rooms either ambient, chilled and frozen; tools and equipment used (examples: forklift, stackers, racks, packaging machines); and the people that involves systems of work on handling, sorting, transferring, stacking, etc..). All these pose as possible sources of contaminations in the event if there are traces and presence of najas (dogs and pigs and derivatives); evidence of prior handling on known non-halal product or cargo; evidence of cross-contamination from due to mixed storage or mistakes by human or by chance. Table 4 depicts the MS2400 requirements emphasizing on cleaning and ritual cleansing requirements imposed on the logistics service providers and warehouse operators to assure contaminations are being addressed and mitigated.

Table 4. Cleaning and Cleansing Requirements in MS2400 Standards

Clause	MS2400: 2010 Part1 – Halalan-Toyyiban Assurance Pipeline Part 1: Management System Requirements for Transportation of Goods and/or Cargo Chain Services.
6.1.1	The design and layout of the premises should permit good hygiene practices, including protection of goods/cargo against cross-contamination between and during operations. Construction and layout of the depot shall permit adequate maintenance and <u>cleaning</u> .
6.1.2	Internal structure of the premises should be soundly built from durable materials and be easy to maintain, clean and where appropriate able to be disinfected or perform <u>Shariah ritual cleansing</u> .
6.2.3	The management shall ensure that all equipment used in the transport chain activities meet specified requirements and are appropriately designed, constructed and installed to facilitate maintenance, adjustment, <u>cleaning</u> and use.
6.5.1	Equipment should be kept in an appropriate state of repair and condition to: a. Facilitate all sanitation procedures including <u>Shariah ritual cleansing</u> . b. Prevent contamination of goods/cargo from non-halal materials and dangerous or hazardous materials.

Table 4(continued)

6.6.1	The organization shall establish and maintain a procedure to outline suitable cleaning methods and materials depending on the nature of the organization's business. The procedure should describe the <u>cleaning and disinfection programs</u> to be undertaken to ensure that all parts of the premises are appropriately clean and in accordance to the halalan-toyyiban requirements. The <u>cleaning program</u> should include the cleaning of the cleaning tools and <u>Shariah ritual cleansing</u> where required.
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Source: MS2400: 2010 Halalan-Toyyiban Assurance Pipeline (Department of Standards Malaysia, 2010).

3.3 Shariah Ritual Cleansing in MS1500 – Devices, Utensils, Machines and Processing Aids

It is interesting also to note on the cleaning and cleansing requirements that are stipulated in the MS1500: 2009 Halal Food production, Preparing, Handling and Storage – General Guidelines (MS1500: 2009). This Malaysian standard serves as practical guidelines for the halal food product and food trade or business in Malaysia. Since this standards focuses on food manufacturing, the emphasis of ritual cleansing are more on the use of utensils and machines in the production of halal food as shown in Table 5.

Table 5. Cleaning and Cleansing Requirements in MS1500 Standards

Clause	MS1500: 2009 Halal Food production, Preparing, Handling and Storage – General Guidelines
3.2.7	The premises shall be effectively separated and well-insulated from pig farms or its processing activities to prevent cross-contamination through personnel and equipment.
3.3.1	Devices, utensils, machines and processing aids used for processing halal food shall be designed and constructed to facilitate <u>cleaning</u> and shall not be made of or contain any materials that are decreed as najis by Shariah law and shall be used only for halal food.
3.3.2	Devices, utensils, machines and processing aids which were previously used or in contact with najis al-mughallazah shall be washed and <u>ritually cleansed</u> as required by the Shariah law.
3.3.3	In the case of converting najis al-mughallazah line or processing line containing najis al-mughallazah into halal production line, the line shall be <u>washed and ritually cleansed as required by the Shariah law</u> . This procedure shall be supervised and verified by the competent authority. Upon conversion, this line shall be operated for halal food only. Repetition in converting the line to najis al-mughallazah line and back to halal line shall not be permitted.

3.4 Shariahritual cleansing procedure

The main aim of Shariah ritual cleansing is to set an intention in heart (*nawaitu*) and mind to carry out proper cleansing with defined procedural steps stipulated and comply with Islamic law together with spiritual faith, Islamic beliefs and values with the motive to purify and to remove all traces of najis in total for cleanliness (toyyib) and halal. Shariah ritual cleansing needs to be supervise and verified by a Shariah competent person or a person who is authorised by the State of Islamic Affairs Department or professional sertu/samak cleaners certified or recognised by the Department of Islamic Department (JAKIM) in Malaysia. Table 6 shows an overview of the najis purification method which are commonly practiced among the Muslims in Malaysia in

compliance with the guidance outlined in the Holy Quran and Islamic teaching syllabus in religious schools in Malaysia.

Table 6. Purification Methods for Najs

Types of Najs	
a. Light Najis (Mukaffafah); urine from a baby boy at the age of 2 years and below who has not consumed any other food except his mother's milk.	Clean Najis and follow by sprinkling water over Najis area with no need to soak with forceful clean water.
b. Moderate Najis (Mutawassitah); blood, lymph, water, vomit, excrement, urine, animal dead body (with exception to human, fish and grasshopper) and milk from these animals prohibited for drinking, etc.	Clean Najis and soak with forceful clean water once in minimum in order to remove all color, odor, and taste. Three sessions of water soaking are recommended.
c. Severe Najis (Mughallazah); pig, dog including liquid and objects discharged from their orifices, descendants and derivatives.	Clean Najis and soak with forceful clean water for seven times. One in those seven times shall be clean ground water in compliance with Islamic Law that has unclear appearance and suspended solid or in the form of chalk solvent. Ground water is recommended in the first soak.

Source: Islamic Teaching School References.

Different types of najis have different procedures to cleanse so as to remove the najis from the contaminated area. Light najis (*mukaffafah*) requires simple cleaning process by just sprinkling with clean water and/or hand wash suffices. For the moderate najis (*mutawassitah*) mentioned in Table 6, the cleansing process is slightly rigor with forceful clean water so as to remove the color, odor, taste and the stains of the contaminants until visibly removed. It is recommended that at least three times of soaking in water to assure the entire removal and purification of the najis is assured with certainty.

This literary paper emphasizes only on cleansing method for severe najis (*mughallazah*) that are relevant to the transport and container operations; and this process is Shariah or halal ritual cleansing or sertu. Shariah ritual cleansing for purification, cleansing and getting rid of all traces of severe najis requires three basic elements namely: 1) water; 2) soil or agent of cleansing (MS2400:2010). However, based on critical analysis on documented present sertu guidelines in Malaysia, this paper attempts to categorize the elements into the following variables: 1) raw material (water or chemicals); 2) product (soil or agent of cleansing); 3) process (procedure of cleansing); 4) people whom carrying out the cleansing and verification; and 5) records.

3.4.1 Raw material – water

Sertu or ritual cleansing requires the use of water as the base element for washing and cleansing. The conditions of the water must be natural (*mutlaq*); and not *mustakmal*; and must be free from najis (MS2400: 2010). According to Shariah law, *mutlak* water is purely water in its original state with no mixture and able to clean and cleanse. *Mutlak* water is water that has not been in contact or in use; be it to washing oneself or to wash away filth and such or mix with any soap or other such chemicals. *Mutlak* water is generally accepted to be as water from rivers, wells, rain water, dew, sea water, melted snow, spring water and tap water (SIRIM, 2015; Life Happenstance, 2014).

3.4.2 Product – soil or agent of cleansing

The conditions of the soils must be 1) free from najis; and not mustakmal (soil which had been used for dry ablution) (MS2400: 2010). Sertu or purification with soil is a way to nullify the germs and illnesses that such impurity holds. Scientists have found that the only way to clean and remove the germs and potential illnesses that may be present in the contaminants in najis mughallazah is using soil (Life Happenstance, 2014). Soil generally refers to clay; however modern technology has developed agents of cleansing such as soap and chemical agents for sertu cleansing.

3.4.3 Process – procedure of cleansing

The process of sertu is to cleanse (wash) the affected area or parts 7 times where 1 wash using mutlak water mixed with soil and 6 washes with mutlak water. Cleansing process guidelines stated in MS2400: 2010 standards as follows; quote:

- a. It is required to wash seven times, one of which shall be water mixed with soil;
- b. The first wash shall be to clear the existence of najis, even if a few washes are needed;
The water from first cleansing shall not remain behind and the next wash shall be counted as the second wash;
- c. The amount of soil used is just enough to make a suspension; and
- d. The usage of cleansing agent containing soil is permitted.

3.4.4 People

As mentioned in Clause 6.7.2, the Shariah cleansing process shall be supervised and verified by a Shariah competent person. Hence, this indicates the people or appointed cleaning contractor that performs or execute the sertu cleaning process must also be knowledgeable on the Shariah procedural requirements and able to comply and perform the ritual cleansing with integrity.

3.4.5 Records

All sertu cleansing carried out or done shall be recorded as stipulated in Clause 6.7.3 of the MS2400: 2010. Records and documents are objective evidences of the processes have been duly carried out and observe all Shariah requirements; for tracing and tracking purposes; and last but not the least for audit and integrity of the halal logistics system.

4 Conclusion

Halal integrity in halal logistics is an integral part of the halal supply chain management. Halal integrity does not confine only to assure halal food products, tracking and traceability but also to protect from any possible contamination and cross contamination that may be present in the supply chain system. Halal integrity also encompasses the cleanliness of transport, containers and trucks and its compliance with Shariah laws. To ensure that cleanliness (toyyib) and also doubtful status of these trucks and containers that carry non-halal products or previously carrying non-halal products is by way of Shariah ritual cleansing of the transport and containers itself. Sertu cleansing is also warranted for machines, utensils or equipment that are used previously in manufacturing of non-halal food products. Sertu ritual cleansing also needs

to be carried out if severe najis such as dogs, pigs and its derivatives are present in the warehouse. Carrying out sertu needs an in-depth understanding of Shariah requirements and carrying out this Islamic ruling is not a task to be taken lightly. This paper concludes sertu ritual cleansing is important to assure halal and toyyib (clean and safe) and the responsibility lies on the logistics service providers and the enforcement on its compliance lies in the halal authority. In summary, the knowledge and literature on halal cleansing or sertu operations can be used as a reference for the halal authority, halal logistics service providers and researchers in halal logistics and supply chain management. It is worthy to note that this paper does not provide the Islamic references or sources from the Holy Quran verses, Hadith and Fatwa to support sertu cleansing.

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