



# MALAYSIAN STANDARD

MS 1500:2009

## **HALAL FOOD - PRODUCTION, PREPARATION, HANDLING AND STORAGE - GENERAL GUIDELINES (SECOND REVISION)**

**ICS: 67.020**

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## Committee representation

The Industry Standards Committee on *Halal* Standards (ISC I) under whose authority this Malaysian Standard was developed, comprises representatives from the following organisations:

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 Department of Standards Malaysia  
 Department of Veterinary Services  
 Federation of Malaysian Manufacturers  
 Halal Industry Development Corporation Sdn Bhd  
 Institute of Islamic Understanding Malaysia  
 Institute of Quality Malaysia  
 International Islamic University of Malaysia  
 Malaysian Agricultural Research and Development Institute  
 Malaysian Association of Standards Users  
 Ministry of Domestic Trade, Cooperative and Consumerism  
 Ministry of Health Malaysia (Food Safety and Quality Division)  
 Ministry of Health Malaysia (National Pharmaceutical Control Bureau)  
 Ministry of International Trade and Industry  
 Muslim Consumers' Association of Malaysia  
 SIRIM Berhad (Secretariat)

### Co-opted member:

Yayasan Ilmuwan

The Technical Committee on *Halal* Food and Islamic Consumer Goods which developed this Malaysian Standard consists of the representatives from the following organisations:

Department of Agriculture Malaysia  
 Department of Fisheries Malaysia  
 Department of Islamic Development Malaysia  
 Department of Veterinary Services  
 Federal Agricultural Marketing Authority  
 Federal Territory Mufti Office  
 Federation of Malaysian Manufacturers  
 Federation of Marketing Authority  
 Halal Industry Development Corporation Sdn Bhd  
 Institute of Islamic Understanding Malaysia  
 Malaysian Agricultural Research and Development Institute  
 Malaysian Association of Standards Users  
 Ministry of Agriculture and Agro-based Industry  
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 SIRIM QAS International Sdn Bhd (Food, Agriculture and Forestry Section)  
 Universiti Kebangsaan Malaysia  
 Universiti Putra Malaysia  
 Universiti Teknologi MARA

## FOREWORD

This Malaysian Standard was developed by the Technical Committee on *Halal* Food and Islamic Consumer Goods under the authority of the Industry Standards Committee on *Halal* Standards.

This Malaysian Standard is the second revision of MS 1500, *Halal food - Production, preparation, handling and storage - General guidelines (First revision)*.

Major modifications in this revision are as follows:

- a) deletion of clause on "Normative reference";
- b) deletion of definition on "Islamic authority";
- c) incorporation of definition on "Premises";
- d) definition of *Shariah* law has been divided into two fields, *Shariah* law and national regulation;
- e) incorporation of new clauses on "Management responsibility";
- f) incorporation of new clauses on "Premises";
- g) incorporation of new clauses on "Packaging, labelling and advertising";
- h) incorporation of new "Stunning method and figure on the pneumatic stunner point";
- i) deletion of clauses on "Mechanical slaughtering"; and
- j) amendment and improvement on "Various clauses for clarity".

This Malaysian Standard cancels and replaces MS 1500:2004.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

## HALAL FOOD - PRODUCTION, PREPARATION, HANDLING AND STORAGE - GENERAL GUIDELINES (SECOND REVISION)

### 1 Scope

This Malaysian Standard provides practical guidance for the food industry on the preparation and handling of *halal* food (including nutrient supplements) and to serve as a basic requirement for Halal food product and food trade or business in Malaysia.

NOTE. This standard does not contain all requirements which may be required for certification. *Halal* certification may be sought by arrangement with the competent authority in Malaysia.

### 2 Definitions

For the purposes of this standard, the following definitions apply.

#### 2.1 Shariah law

**2.1.1** *Shariah* law is the orders of Allah which relate to the action of the people who are being accountable (*mukallaf*) by obligation, option or *al wadh'u*<sup>1</sup>.

**2.1.2** *Shariah* law defined by Malaysia law means the laws of Islam in the *Mazhab* of Shafie or the laws of Islam in any of the other *Mazhabs* of Maliki, Hambali and Hanafi which are approved by the Yang di-Pertuan Agong to be in force in the Federal Territory or the Ruler of any State to be in force in the state or *fatwa* approved by the Islamic Authority.

#### 2.2 Halal

Things or actions permitted by *Shariah* law without punishment imposed on the doer.

#### 2.3 Halal food

*Halal* food means food and drink and/or their ingredients permitted under the *Shariah* law and fulfill the following conditions:

- a) does not contain any parts or products of animals that are non-*halal* by *Shariah* law or any parts or products of animals which are not slaughtered according to *Shariah* law;
- b) does not contain *najs* according to *Shariah* law;
- c) safe for consumption, non-poisonous, non-intoxicating or non-hazardous to health;
- d) not prepared, processed or manufactured using equipment contaminated with *najs* according to *Shariah* law;

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<sup>1</sup> *Al wadh'u* is a requirement prior to the implementation of any *Shariah* law, e.g. adhering to the prayer time is the requirement for prayer to be valid.

- e) does not contain any human parts or its derivatives that are not permitted by *Shariah* law; and
- f) during its preparation, processing, handling, packaging, storage and distribution, the food is physically separated from any other food that does not meet the requirements stated in items a), b), c), d) or e) or any other things that have been decreed as *najs* by *Shariah* law.

## 2.4 Najs

### 2.4.1 Najs according to *Shariah* law are:

- a) dogs and pigs and their descendents;
- b) *halal* food that is contaminated with things that are non-*halal*;
- c) *halal* food that comes into direct contact with things that are non-*halal*;
- 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 and ova of other animals;

NOTE. Milk, sperm and ova of human and animals, except dog and pig, are not *najs*.

- e) carrion or *halal* animals that are not slaughtered according to *Shariah* law; and
- f) *khamar*<sup>2</sup> and food or drink which contain or mixed with *khamar*.

### 2.4.2 There are three types of *najs*:

- a) *mughallazah* which is considered as severe *najs* which are dogs and pigs (*khinzir*) including any liquid and objects discharged from their orifices, descendants and derivatives.;
- b) *mukhaffafah* which is considered as light *najs*. The only *najs* in this category 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; and
- c) *mutawassitah* which is considered as medium *najs* which does not falls under severe or light *najs* such as vomit, pus, blood, *khamar*, carrion, liquid and objects discharged from the orifices, etc.

## 2.5 Slaughtering

According to *Shariah* law the slaughter act that sever the trachea (*halqum*), oesophagus (*mari*) and both the carotid arteries and jugular veins (*wadajain*) to hasten the bleeding and death of the animal.

<sup>2</sup> Such as alcoholic beverages and intoxicant.

## 2.6 Competent authority

Competent authority is the agency which is entrusted by the government to carry out specified work according to prescribed requirements.

NOTE. In Malaysia there are various competent authorities which are responsible in respective areas such as Islamic affairs, *halal* certification, animal health, public health, food safety, and etc.

## 2.7 Premises

Any building or any other structure, permanent or otherwise together with the land on which the building, or other structure is situated and any adjoining land used in connection with the preparation, slaughtering, processing, handling, packaging, storage, distribution and sale of any food.

# 3 Requirements

## 3.1 Management responsibility

3.1.1 The management shall appoint muslim *halal* executive officers or establish a committee which consist of muslim personnel who are responsible to ensure the effectiveness in implementation of internal *halal* control system.

3.1.2 The management shall ensure that they are trained on the *halal* principles and its application.

3.1.3 The management shall ensure that sufficient resources (i.e. manpower, facility, financial and infrastructure) are provided in order to implement the *halal* control system.

## 3.2 Premises

Premises shall be designed and constructed or renovated so as to enable the process flow to control the risk of product contamination and suitable for intended use.

3.2.1 Layout of premises shall permit proper process flow, proper employee flow, good hygienic and safety practices, including protection against pest infestation and cross-contamination between and during operations.

3.2.2 Product process flow from receipt of raw materials to the finished products shall prevent cross contamination.

3.2.3 The premises shall be designed to facilitate cleaning and proper supervision of food hygiene.

3.2.4 Adequate sanitary facilities shall be provided and maintained.

3.2.5 Loading and unloading bay shall be appropriately designed to allow effective transfer of perishable products.

3.2.6 Premises shall be kept in good repair and condition to prevent pest access and to eliminate potential breeding sites.

**3.2.7** The premises shall be effectively separated and well insulated from pig farm or its processing activities to prevent cross contamination through personnel and equipment.

**3.2.8** Slaughtering and processing premises shall be dedicated for *halal* slaughtering and *halal* processing only.

**3.2.9** Processing of carcasses such as deboning, cutting, packing and storing shall be done in the same premises as slaughtering or in approved premises by the competent authority that meets the requirements of this standard.

**3.2.10** Pets and other animals shall be refrained from entering the premises.

### 3.3 Devices, utensils, machines and processing aids

**3.3.1** Devices, utensils, machines and processing aids used for processing *halal* food shall be designed and constructed to facilitate cleaning and shall not be made of or contain any materials that are decreed as *najs* 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 *najs al-mughallazah* shall be washed and ritually cleansed as required by *Shariah* law (see Annex B).

**3.3.3** In the case of converting *najs al-mughallazah* line or processing line containing *najs al-mughallazah* into *halal* production line, the line shall be washed and ritually cleansed as required by *Shariah* law (see Annex B). This procedure shall be supervised and verified by the competent authority. Upon conversion, the line shall be operated for *halal* food only. Repetition in converting the line to *najs al-mughallazah* line and back to *halal* line, shall not be permitted.

### 3.4 Hygiene, sanitation and food safety

**3.4.1** Hygiene, sanitation and food safety are prerequisites in the preparation of *halal* food. It includes the various aspects of personal hygiene, clothing, devices, utensils, machines and processing aids and the premises for processing, manufacturing and storage of food.

**3.4.2** *Halal* food manufacturers shall implement measures to:

- a) inspect and sort raw material, ingredients and packaging material before processing.
- b) manage waste effectively;
- c) store harmful chemical substances appropriately and away from *halal* food;
- d) prevent contamination of foods by foreign matters such as plastic, glass or metal shards from machinery, dust, harmful gas or fumes and unwanted chemicals; and
- e) prevent excessive use of permitted food additives

In manufacturing and processing, suitable detection or screening devices should be used where necessary.

**3.4.3** *Halal* food shall be processed, packed and distributed under hygienic condition in premises licensed in accordance with good hygiene practices (GHP), good manufacturing practices (GMP) or such as specified in the *Garispanduan amalan pengilangan yang baik*, Ministry of Health Malaysia, MS 1514 or MS 1480 and public health legislation currently in force by the competent authority in Malaysia.

### 3.5 Processing of *halal* food

#### 3.5.1 Sources of *halal* food and drink

##### 3.5.1.1 Animals

Animals can be divided into two categories:

##### 3.5.1.1.1 Land animals

All land animals are *halal* as food except the following:

- a) animals that are not slaughtered according to *Shariah* law;
- b) *najs al-mughallazah* animal, i.e. pigs and dogs their descendants;
- c) animals with long pointed teeth or tusks which are used to kill prey such as tigers, bears, elephants, cats, monkeys, etc.;
- d) predator birds such as eagles, owls and etc.;
- e) pests and/or poisonous animals such as rats, cockroaches, centipedes, scorpions, snakes, wasps and other similar animals;
- f) animals that are forbidden to be killed in Islam such as bees (*al-nahlah*), woodpeckers (*hud-hud*), etc.;
- g) creatures that are considered repulsive such as lice, flies, etc.;
- h) farmed *halal* animals which are intentionally and continually fed with *najs*; and
- i) other animals forbidden to be eaten in accordance to *Shariah* law such as donkeys and mules.

##### 3.5.1.1.2 Aquatic animals

Aquatic animals are those which live in water and cannot survive outside it, such as fish. All aquatic animals are *halal* except those that are poisonous, intoxicating or hazardous to health. Animals that live both on land and water such as crocodiles, turtles and frogs are not *halal*.

Aquatic animals which live in *najs* or intentionally and/or continually fed with *najs* are not *halal*.

### 3.5.1.2 Plants

All types of plants and plant products and their derivatives are *halal* except those that are poisonous, intoxicating or hazardous to health.

### 3.5.1.3 Mushroom and micro-organisms

All types of mushroom and micro-organisms (i.e. bacteria, algae and fungi) and their by-products and/or derivatives are *halal* except those that are poisonous, intoxicating or hazardous to health.

### 3.5.1.4 Natural minerals and chemicals

All natural minerals and chemicals are *halal* except those that are poisonous, intoxicating or hazardous to health.

### 3.5.1.5 Drinks

All kinds of water and beverages are *halal* as drinks except those that are poisonous, intoxicating or hazardous to health.

### 3.5.1.6 Genetically modified food (GMF)

Food and drinks containing products and/or by-products of Genetically modified organisms (GMOs) or ingredients made by the use of genetic material of animals that are non-*halal* by *Shariah* law are not *halal*.

**3.5.1.7** Notwithstanding 3.5.1.1.2 and 3.5.1.2 the products from hazardous aquatic animals or plants are *halal* when the toxin or poison has been eliminated during processing, as permitted by *Shariah* law.

## 3.5.2 Slaughtering process

**3.5.2.1** The slaughtering process shall take into account animal welfare in accordance to *Shariah* law. The following requirements shall also be complied with:

- slaughtering shall be performed only by a practicing muslim who is mentally sound, *baligh*, fully understands the fundamental rules and conditions related to the slaughter of animals in Islam;
- the slaughterman shall have certificate for *halal* slaughter issued by a competent authority;
- the act of slaughtering shall be done with *niyyah* (intention) in the name of Allah and not for other purposes. The slaughterman is well aware of his action;
- the animal to be slaughtered has to be an animal that is *halal*;
- the animal to be slaughtered shall be alive or deemed to be alive (*hayat al-mustaqirrah*<sup>3</sup>) at the time of slaughter;

<sup>3</sup> The animals are deemed to be alive or *hayat al-mustaqirrah*, when blood gushing out during slaughtering and movement of the animals after slaughtering.

- animals to be slaughtered shall be healthy and have been approved by the competent authority;
- tasmiyyah*<sup>4</sup> has to be invoked immediately before slaughtering;
- the slaughtering is recommended to be performed while facing the qiblah;
- slaughtering lines, tools and utensils shall be dedicated for *halal* slaughter only;
- slaughtering knife or blade shall be sharp and free from blood and other impurities;
- slaughtering shall be done only once. The "sawing action" of the slaughtering is permitted as long as the slaughtering knife or blade is not lifted off the animal during the slaughtering;
- bones, nails and teeth shall not be used as slaughtering tools;
- the act of *halal* slaughter shall begin with an incision on the neck at some point just below the glottis (Adam's apple) and after the glottis for long necked animals;
- the slaughter act shall sever the trachea (*halqum*), oesophagus (*mari'*) and both the carotid arteries and jugular veins (*wadajain*) to hasten the bleeding and death of the animal (see Figures 1 to 4). The bleeding shall be spontaneous and complete; and
- a trained Muslim inspector shall be appointed and be responsible to check that the animals are properly slaughtered according to the *Shariah* law.

**3.5.2.2** For poultry, scalding shall only be carried out on animals that are deemed dead as a result of *halal* slaughter.

**3.5.2.3** Stunning is not recommended. However if stunning is to be carried out the conditions specified in Annex A shall be complied.

## 3.5.3 Processing, handling, distribution and serving

All processed *halal* food shall meet the following requirements:

- food or its ingredients shall not be processed using any components or products of animals that are non-*halal* by *Shariah* law or of *halal* food any components or products of animals that are not slaughtered according to *Shariah* law;
- food shall not be processed using anything in any quantity that is decreed as *najs* by *Shariah* law;
- processed food or its ingredients shall be safe for consumption, non-poisonous, non-intoxicating or non-hazardous to health;
- food shall be prepared, processed or manufactured using equipment and facilities that are free from contamination with *najs*; and

<sup>4</sup> Among the phrases are *بِسْمِ اللَّهِ أَكْبَرُ* (*BISMILLAH ALLAHUAKBAR*) which means "In the name of Allah, Allah Almighty great" and *بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ* (*BISMILLAHIRRAHMANIRRAHIM*) which means "In the name of Allah, Most Gracious, Most Merciful".



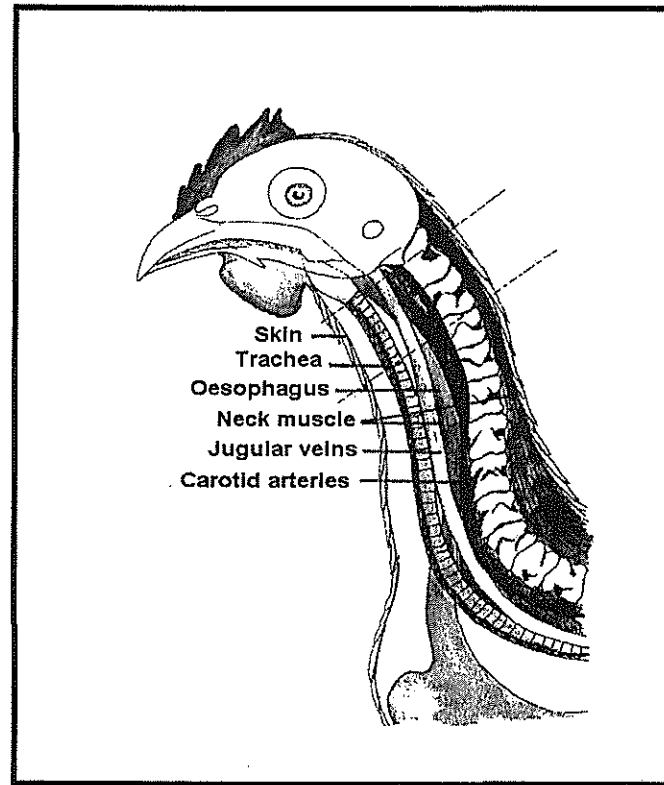


Figure 1. Slaughtering part for chicken

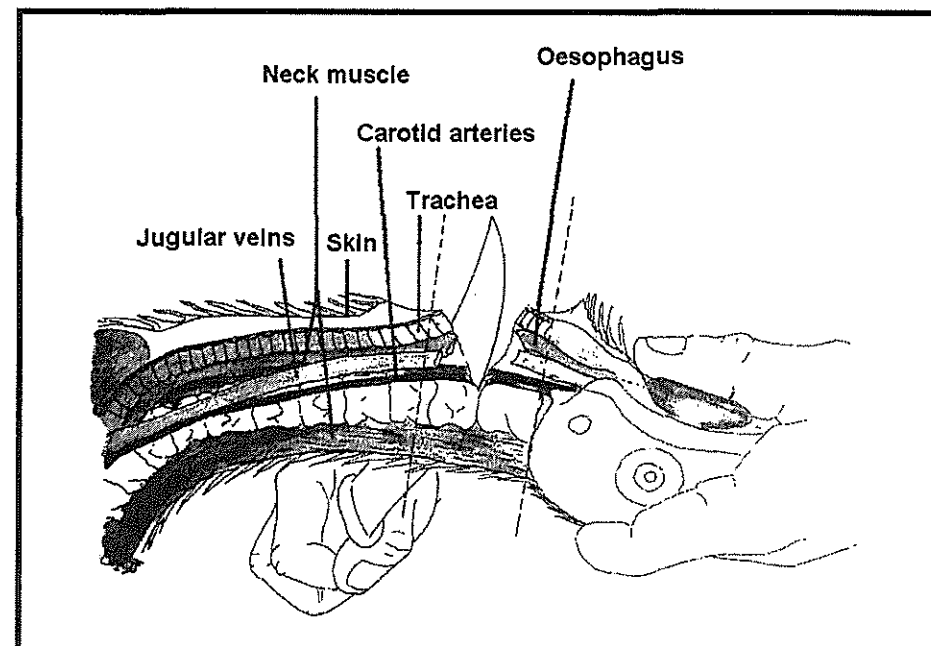


Figure 2. Method of slaughtering chicken

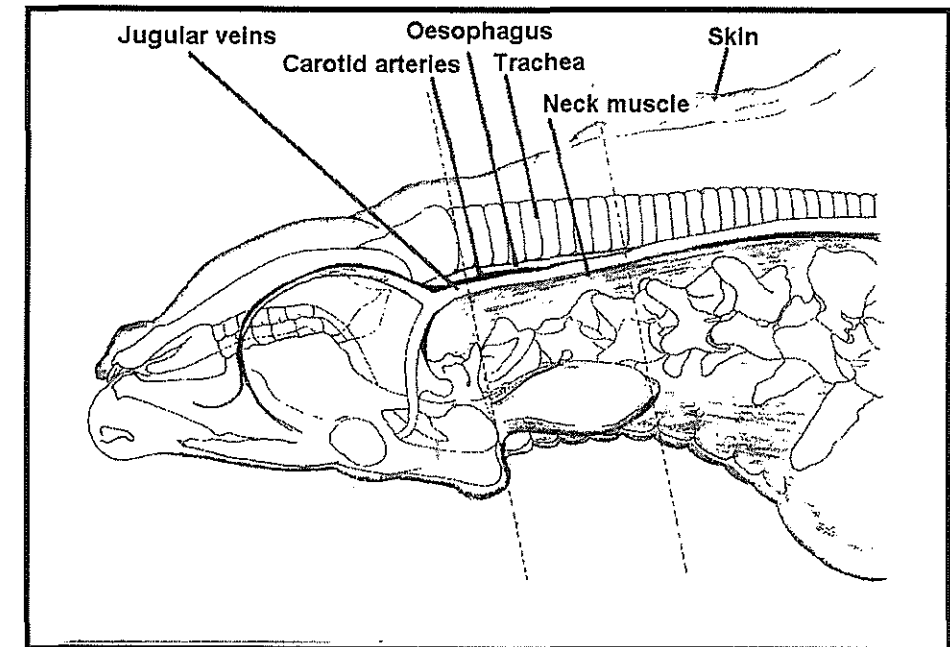


Figure 3. Slaughtering part for cattle

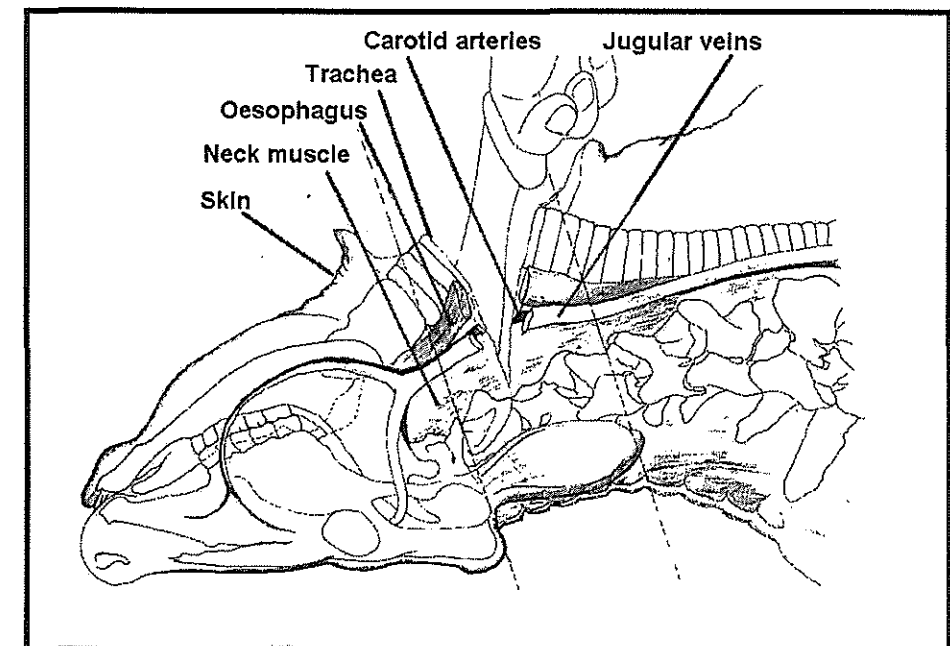


Figure 4. Method of slaughtering cattle



- e) during its preparation, processing, handling, packaging, storage distribution and serving, it shall be physically separated from any other food that does not meet the requirements specified in items a), b), c) and/or d) or any other things that are decreed as *najs* by *Shariah* law.

### 3.6 Storage, transportation, display, sale and servings of *halal* food

**3.6.1** All *halal* food that are stored, transported, displayed, sold and/or served shall be categorised and labelled *halal* and segregated at every stage so as to prevent them from being mixed or contaminated with things that are non-*halal*.

**3.6.2** Products based on *naj al-Mughallazah* shall be stored in dedicated place.

**3.6.3** Transportation vehicles such as bonded truck shall be dedicated and appropriate to the type of the *halal* food and satisfy hygiene and sanitation condition.

### 3.7 Packaging, labelling and advertising

**3.7.1** *Halal* food shall be suitably packed. Packaging materials shall be *halal* in nature and shall fulfill the following requirements:

- a) the packaging materials shall not be made from any raw materials that are decreed as *najs* by *Shariah* law;
- b) it is not prepared, processed or manufactured using equipment that is contaminated with things that are *najs* as decreed by *Shariah* law;
- c) during its preparation, processing, storage or transportation, it shall be physically separated from any other food that does not meet the requirements stated in item a) or b) or any other things that have been decreed as *najs* by *Shariah* law;
- d) the packaging material does not have any toxic effect on the *halal* food; and
- e) packaging design, sign, symbol, logo, name and picture shall not be misleading and/or contravening the principles of *Shariah* law.

**3.7.2** Packing process shall be carried out in a clean and hygienic manner and in sound sanitary conditions.

**3.7.3** Labelling material used in direct contact with the product shall be non-hazardous and *halal*.

**3.7.4** *Halal* food and *halal* artificial flavour shall not be named or synonymously named after non *halal* products such as ham, *bak kut teh*, bacon, beer, rum and others that might create confusion.

**3.7.5** Each container shall be marked legibly and indelibly or a label shall be attached to the container, with the following information:

- a) name of the product;
- b) nett content expressed in metric system (SI units);

- c) name and address of the manufacturer, importer and/or distributor and trademark;
- d) list of ingredients;
- e) code number identifying date and/or batch number of manufacture and expiry date; and
- f) country of origin.

**3.7.6** For primary meat products, the label or mark shall also include the following information:

- a) date of slaughter; and
- b) date of processing.

**3.7.7** Advertising shall not contravene with the principles of *Shariah* law and shall not display indecent elements which are against *Shariah* law.

### 3.8 Legal requirements

The product shall in other aspects comply with legislation including other relevant requirements currently in force in Malaysia.

## 4 Compliance

For product deemed to comply with this standard, it shall comply with Clause 3 of this standard. This shall be verified through site inspection as deemed necessary by the competent authority.

## 5 *Halal* certificates

The *halal* certificates shall be issued by the competent authority in Malaysia

## 6 *Halal* certification mark

Each product, upon approval by the competent authority in Malaysia, may be marked with the *halal* certification mark of that authority provided the product conforms to the requirements of this standard.

## Annex A (normative)

### Requirements on the use of stunning in slaughter of ruminant and poultry

#### A1 General requirements

**A1.1** Slaughtering shall be carried out according to the requirements related to the slaughter of animals in Islam.

**A1.2** The animal shall be alive or deemed to be alive (*hayat al-mustaqirrah*) at the time of slaughter.

**A1.3** Stunning is not recommended, however if stunning has to be carried out, the permitted methods are electrical or pneumatic percussive stunning.

**A1.4** The use of stunning equipment shall be under the supervision of a trained muslim and periodically monitored by competent authority.

**A1.5** The stunning shall not kill or cause permanent physical injury to the animal.

**A1.6** Stunners which are used to stun the animals under *mughallazah najs* category shall not be used to stun animals for *halal* slaughter.

#### A2 Electrical stunning

**A2.1** The electrical stunner shall be of the type allowed by the competent authority in charge of slaughter.

**A2.2** The type of stunner used for slaughter of *halal* animals shall be 'head only stunner' type, where both electrodes are placed on the head region.

**A2.3** Electrical stunning of poultry is allowed using "water bath stunner" only.

**A2.4** The strength of current used shall be supervised by a trained muslim and monitored by competent authority. The guidelines on stunning parameters are as specified in Tables A1 and A2.

Table A1. Guideline parameters for electrical stunning of chicken and bull

Type of stock	Weight (kg)	Current (A)	Voltage (V)	Duration (s)
Chicken	2.40 - 2.70	0.20 - 0.60	2.50 - 10.50	3.00 - 5.00
Bull	300 - 400	2.50 - 3.50	300 - 310	3.00 - 5.00

NOTE: Electrical current, voltage and duration to be determined and validated by the organisation, taking into account the type and weight of the animal and other varying factors.

Table A2. Guideline parameters for electrical stunning of other animals

Type of stock	Current (A)	Duration (s)
Lamb	0.50 - 0.90	2.00 - 3.00
Goat	0.70 - 1.00	2.00 - 3.00
Sheep	0.70 - 1.20	2.00 - 3.00
Calf	0.50 - 1.50	3.00
Steer	1.50 - 2.50	2.00 - 3.00
Cow	2.00 - 3.00	2.50 - 3.50
Buffalo	2.50 - 3.50	3.00 - 4.00
Ostrich	0.75	10.00

NOTE: Electrical current and duration to be determined and validated by the organisation, taking into account the type and weight of the animal and other varying factors.

#### A3 Pneumatic percussive stunner

**A3.1** Pneumatic percussive stunning is only suitable for all bovine animals.

**A3.2** The air pressure that powers the stunner should not be more than 225 psi and should be kept to the minimum required to stun the animal.

**A3.3** The head of the stunner shall be flat or slightly convex.

**A3.4** There shall be a protective collar around head of the stunner so that it shouldn't protrude more than 3 mm beyond it.

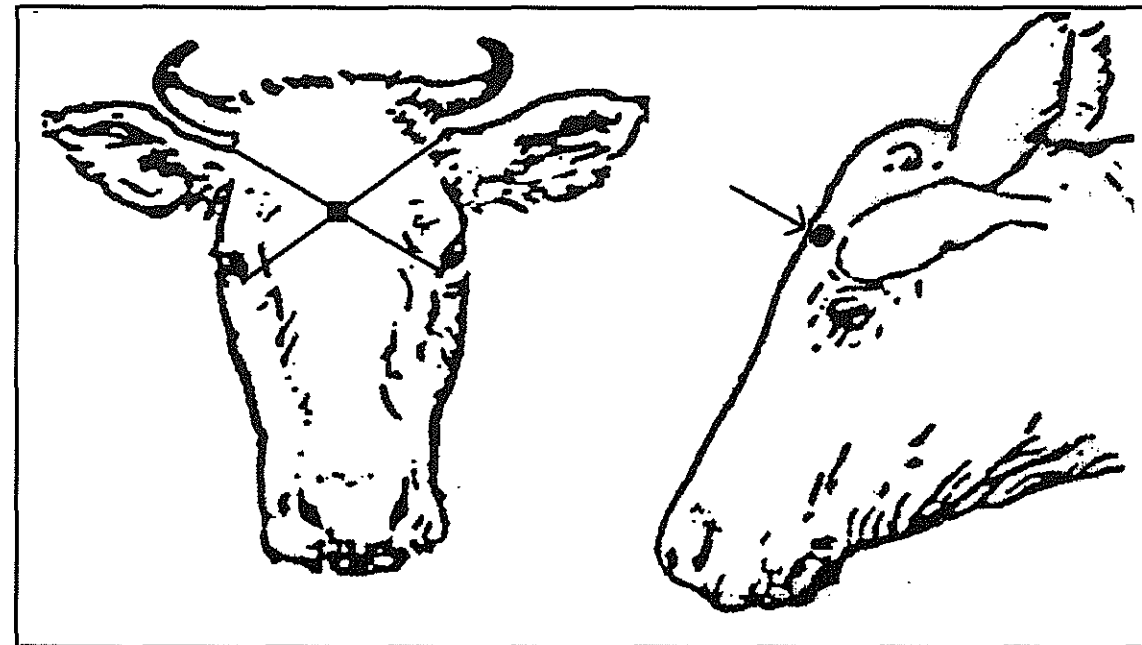


Figure A1. Diagram of skull and placement for pneumatic stunner

**A3.5** The heads of animal to be stunned shall be held still before the stunner can be applied.

**A3.6** The centre of the stunner shall be in contact with the animal at a point of intersection of lines drawn from the medial corners of the eyes and the base of the ears (Figure A1).

**A3.7** The stunner shall be applied so that the head of the stunner is perpendicular to the frontal bone.

**A3.8** The animal shall be stunned once.

## Annex B (normative)

### Method of ritual cleansing according to *Shariah* law for *najs al-mughallazah*

#### B1 General requirements

The *najs*, whether visible (*'ainiah*) or invisible (disappeared or dried up etc.) is named *hukmiah*. To cleanse *najs*:

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

#### B2 Conditions of the soil

The conditions of the soil are:

- free from *najs*; and
- not *musta'mal* soil [which had been used for dry ablution (*tayammum*)] except after subject to heavy rain.

#### B3 Conditions of the water

The conditions of the water are:

- shall be natural (*mutlaq*);
- not *musta'mal*<sup>5</sup>; and
- free from *najs*.

<sup>5</sup> *Musta'mal* water is the water that is less than two *qullah* (approximately 192 L) that had been used for cleansing.

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