

HALAL CERTIFICATION AND HALAL RESEARCH DEVELOPMENT SYSTEM IN MALAYSIA

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King Faisal International Prize 2018 Laureate

*International Institute for Halal Research and Training
(INHART), International Islamic University Malaysia (IIUM)*

*Prince Songkla University
15 January 2022*

35 research projects completed

200 published papers in indexed journals

6 patents; 3 licensed/ commercialised

250 papers presented in international conferences
(Mostly invited speaker)

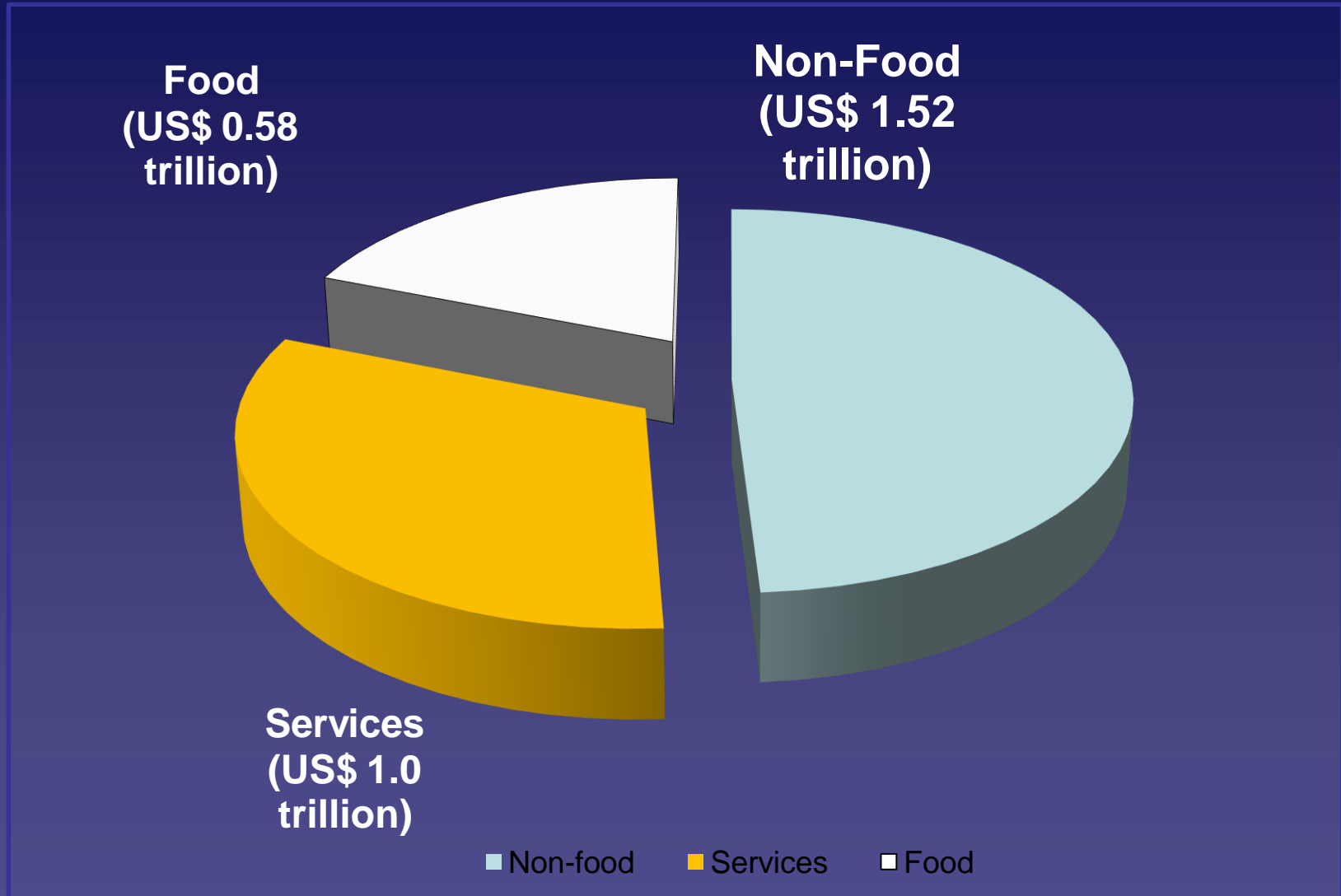
35 Book Chapters

50 Scientific Awards

H Index 27 (2178 Citations)



Global Halal Market 2017~ US\$3.1 trillion/year



Source : Fourth Industrial Master Plan (IMP3)

What industry involve Halal?

Traditional



Processed food and beverages



Organic and non-organic ingredients



Logistics services

Emerging



Cosmetics, personal care and healthcare products



Tourism services



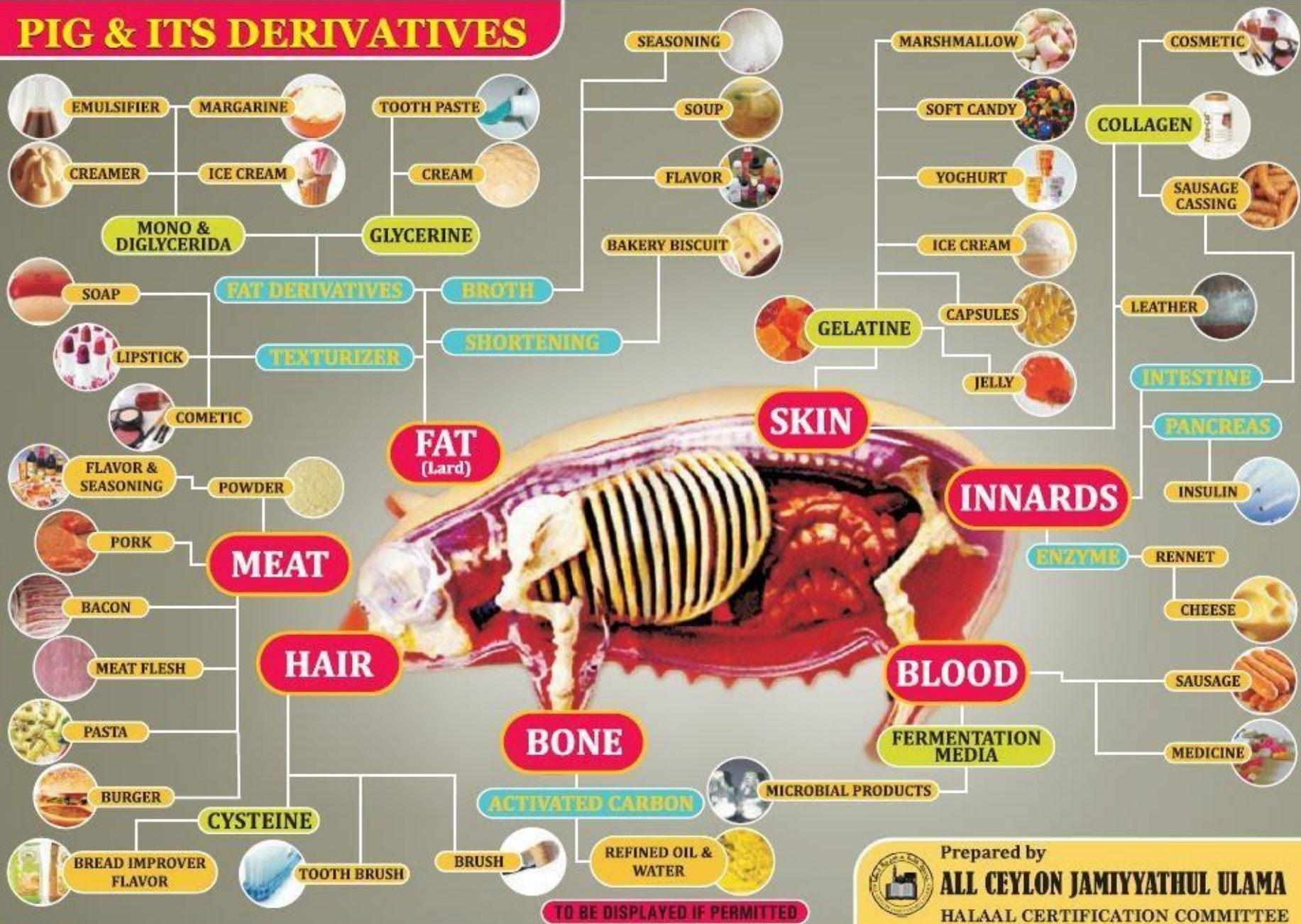
Modest Fashion

Halal is about quality of life....



Halal concept is not just for Muslim. It is for everyone

PIG & ITS DERIVATIVES

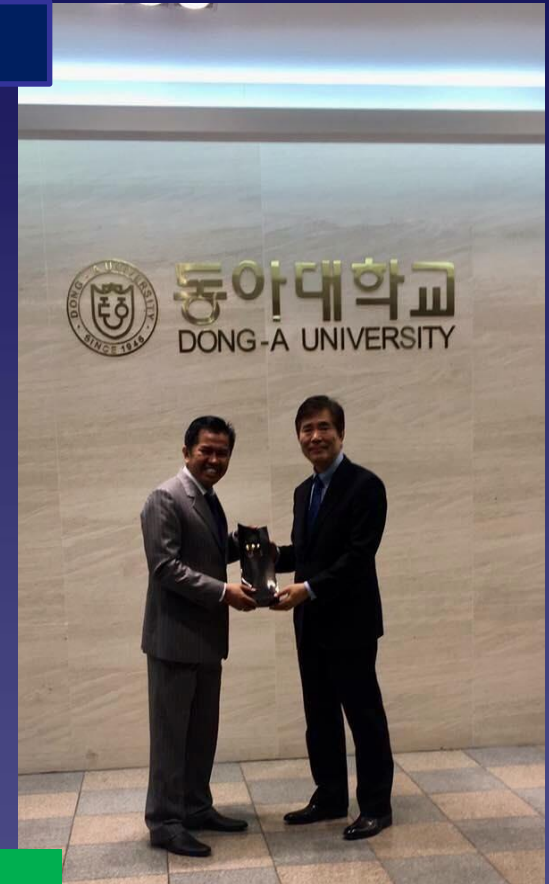


TO BE DISPLAYED IF PERMITTED



Prepared by
ALL CEYLON JAMIYYATHUL ULAMA
 HALAAL CERTIFICATION COMMITTEE

HALAL???



25th and 27th April 2018, South Korea

Global Halal Industry and Food Security

- Halal business - lucrative industry and huge opportunities for domestic and international trade, e.g. Nestle -154 halal-certified range stretches from culinary products to beverages, dairy, chocolates and sports and infants nutrition products
- Demand for halal food and other Islamic consumer goods is expected to proliferate in the coming years
- Currently, ~ 2.0 billion Muslims
- Growing demand not only from Muslims but also others wishing for extra security on food safety and quality (thoyyiba)

Korean Cosmetics

2300 COMPANIES



< Irwandi Jaswir
5 Apr •

My views on Korean cosmetic industry in Tempo
(English Version).

Pandangan saya tentang industri kosmetik halal Korea
yang ditulis Tempo.



TODAY.LINE.ME
South Korean Cosmetic Industry Eyeing the Halal Industry





MALAYSIA OFFERS A COMPLETE HALAL ECOSYSTEM

Production



Halal food & beverages



Halal pharmaceutical



Halal cosmetics & personal care



Halal Ingredients

Services



Halal logistic



Islamic healthcare



Islamic banking & takaful



Islamic tourism

Infrastructure



Halal Industrial Parks



Halal R&D – testing lab



Traceability system



Standard & certification

Government Support



STANDARDS
MALAYSIA

Human Capital



- Halal Knowledge Workers
- Halal Executives & Auditors
- Syllabus in universities & colleges

“Halal as the new source of economic growth”



TOP 15 COUNTRIES GIE Indicator Score



TOP 10 Halal Food

- 1 MALAYSIA
- 2 PAKISTAN
- 3 UAE
- 4 AUSTRALIA
- 5 OMAN
- 6 BRAZIL
- 7 JORDAN
- 8 AZERBAIJAN
- 9 EGYPT
- 10 QATAR



TOP 10 Islamic Finance

- 1 MALAYSIA
- 2 SAUDI ARABIA
- 3 UAE
- 4 SAUDI ARABIA
- 5 OMAN
- 6 PAKISTAN
- 7 KUWAIT
- 8 QATAR
- 9 INDONESIA
- 10 SUDAN



TOP 10 Halal Travel

- 1 MALAYSIA
- 2 UAE
- 3 SINGAPORE
- 4 THAILAND
- 5 JORDAN
- 6 MALDIVES
- 7 TURKEY
- 8 SAUDI ARABIA
- 9 QATAR
- 10 SAUDI ARABIA



TOP 10 Modest Fashion

- 1 CHINA
- 2 UAE
- 3 ITALY
- 4 BURKINA FASO
- 5 SRI LANKA
- 6 SINGAPORE
- 7 TURKEY
- 8 TOGO
- 9 SENEGAL
- 10 FRANCE



TOP 10 Halal Media and Recreation

- 1 SINGAPORE
- 2 UAE
- 3 LEBANON
- 4 UK
- 5 FRANCE
- 6 GERMANY
- 7 SAUDI ARABIA
- 8 USA
- 9 AUSTRALIA
- 10 CANADA



TOP 10 Halal Pharma and Cosmetics

- 1 SINGAPORE
- 2 EGYPT
- 3 MALAYSIA
- 4 PAKISTAN
- 5 JORDAN
- 6 UAE
- 7 INDONESIA
- 8 OMAN
- 9 SAUDI ARABIA
- 10 YEMEN

GLOBAL HALAL HUBS

The Positions

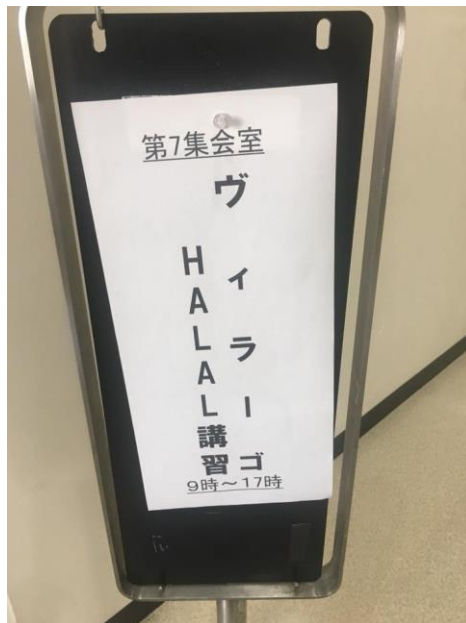
STATE OF THE GLOBAL ISLAMIC ECONOMY REPORT 2015/16

Source: Thomson Reuters & Dinar
Standard

Korea dan Makanan Sunnah



■ Olimpiade Tokyo dan Halal



HALAL AWARENESS FOR MUSLIM FRIENDLY HOSPITALITY SERVICES PROGRAM for Japanese Industries, TOKYO, JAPAN

Bagaimana di Saudi?



Halal talk in Food
Conference, Jeddah 2015

Halal di Xinjiang



Halal di China



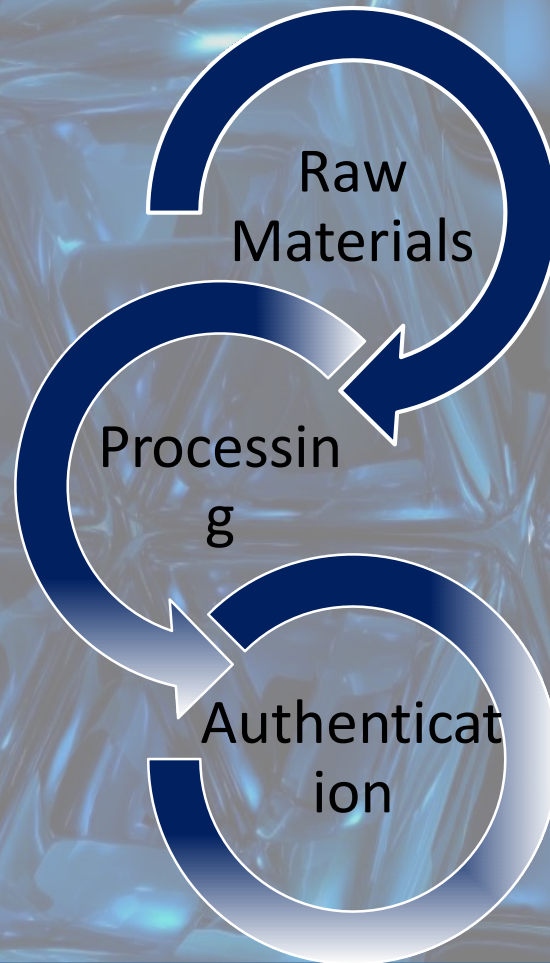
Halal di Taiwan



Issues in Halal Industry

- Halal food concept is simple; however, the industry is becoming more complex
- Due to breathtaking technological development today and the diversification of sources acquired globally for food processing and production, numerous number of processed food are available in the market
- It is increasingly difficult for Muslims during this challenging times to ensure the halal status of food in the market
- This trend has raised concerns among Muslim consumers regarding new processed food and other consumer products

Tiga Isu Halal Utama



Potential Critical Areas

- Raw materials – animal or plant origin
- Slaughtering – stunning and thoracic sticking issues
- Processing operations/equipment – cross-contamination
- Packaging/Storage/Transportation (logistic issues)
- Food ingredients and additives
 - Pig and its by-products (e.g. pork, lard, gelatin)
 - Enzymes (e.g. rennet, pepsin)
 - Emulsifiers (e.g. E471/E472 or mono- & diglycerides)
 - Intoxicants (alcoholic beverages, drugs)
 - Blood
- Genetically modified food
- Safety and quality aspects

Placenta Halal?



Teknologi HPP



Past and Current Research on Gelatin

- Gelatin from local goat for pharmaceutical capsules (in Indonesia)
 - Fish gelatin (30 species)
 - Production of fish gelatin nano-particles
- Encapsulation of bioactive peptide using gelatin nano-particles
 - Production of plant-based gelatin replacers
- Development of portable device for rapid authentication of non halal gelatin
 - Determination of gelatins in dental materials
 - Camel gelatin project (with KSU)
 - Seaweeds projects

Camel Gelatin Project



Pilot Plant of Gelatin and Derivatives





A



B



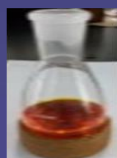
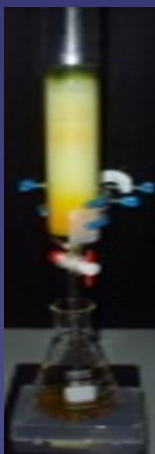
C








D



E

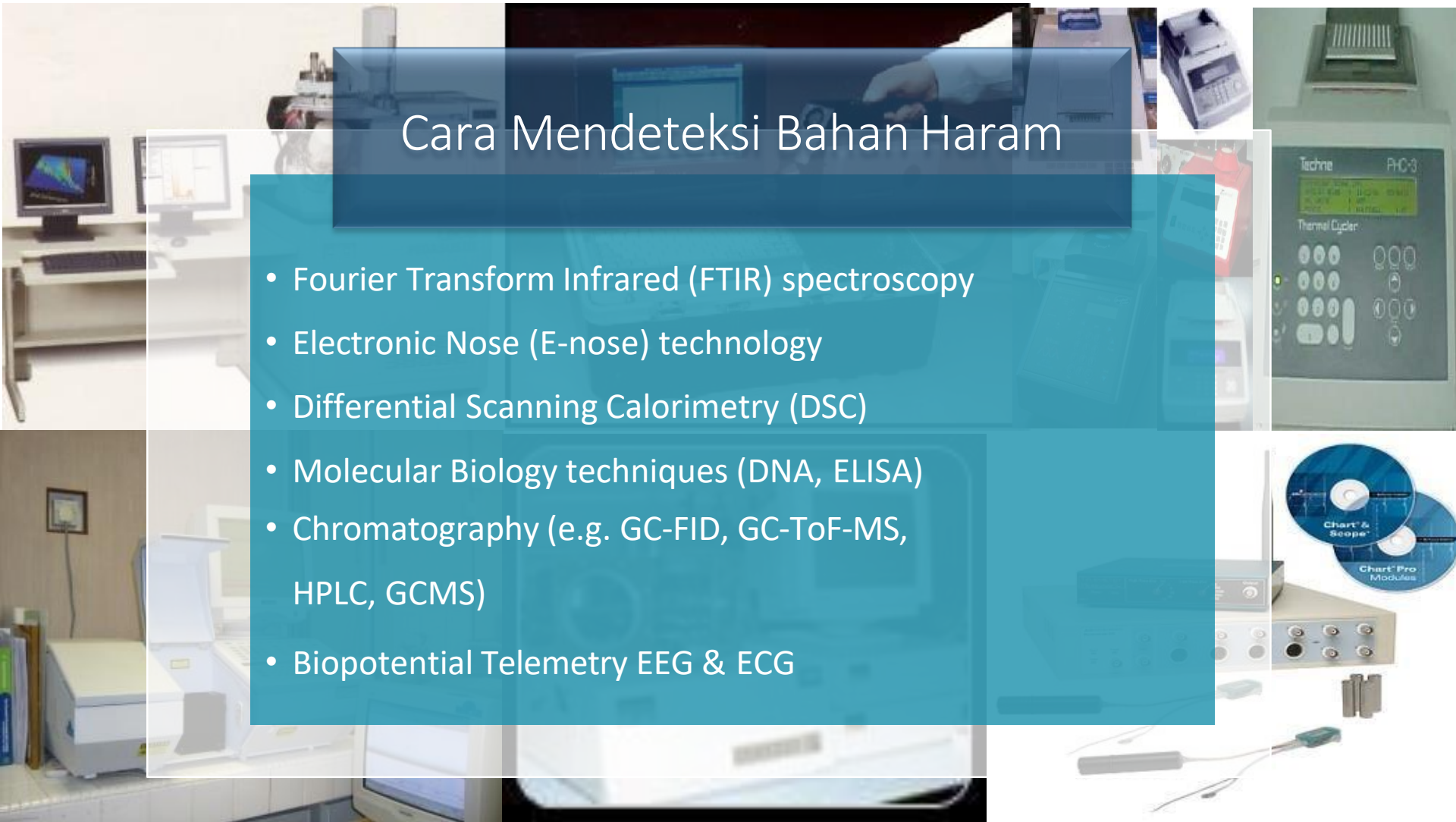


-  Antioxidant
-  Anti-cancer
-  Anti-diabetic
-  Anti-inflammatory
-  Anti-obesity

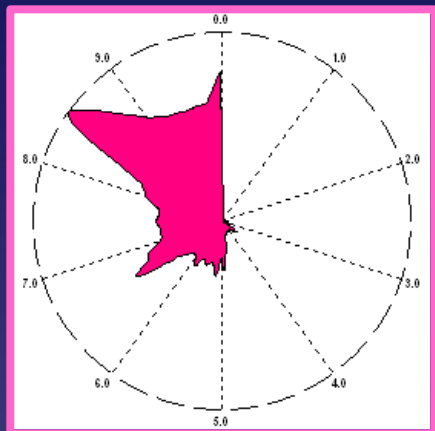


Cara Mendeteksi Bahan Haram

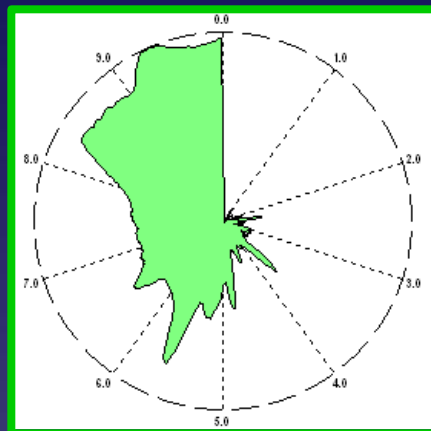
- Fourier Transform Infrared (FTIR) spectroscopy
- Electronic Nose (E-nose) technology
- Differential Scanning Calorimetry (DSC)
- Molecular Biology techniques (DNA, ELISA)
- Chromatography (e.g. GC-FID, GC-ToF-MS, HPLC, GCMS)
- Biopotential Telemetry EEG & ECG



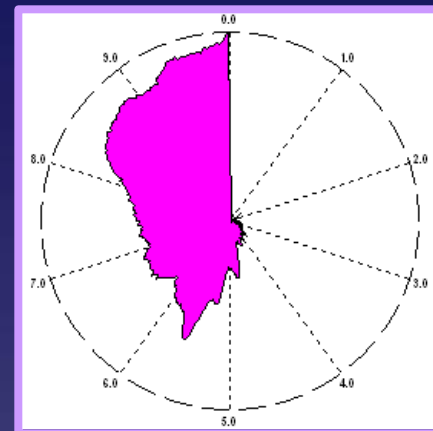
VaporPrint™



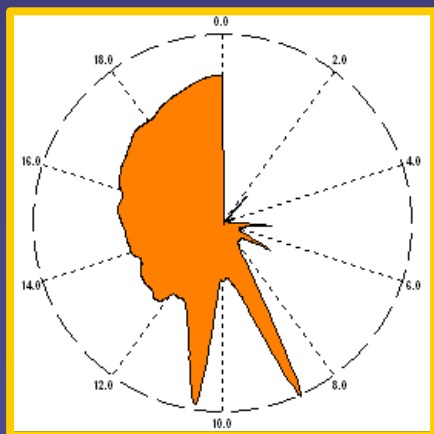
CORN OIL



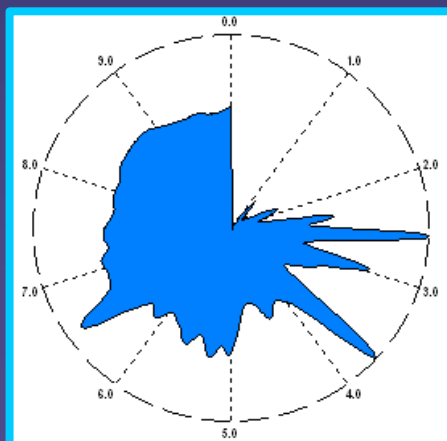
PEANUT OIL



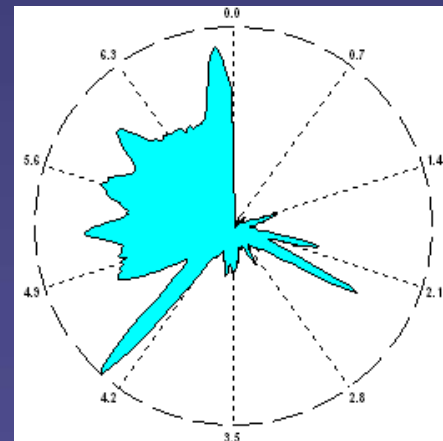
PALM OLEIN



COCONUT OIL



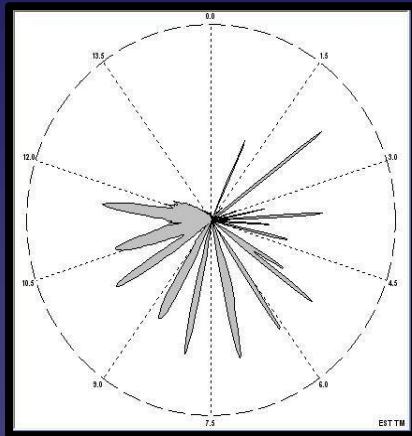
SESAME OIL



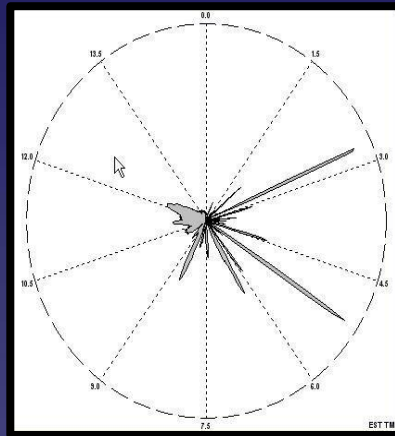
LARD

Rapid Detection of Haram Meat (pork) by Electronic Nose

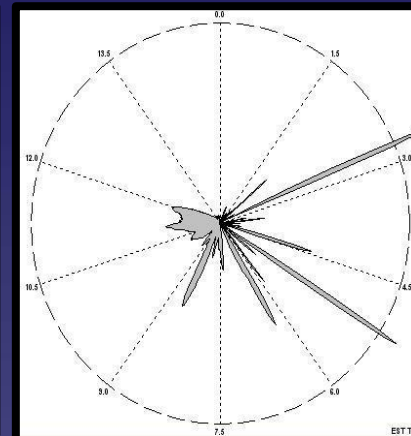
VaporPrint™



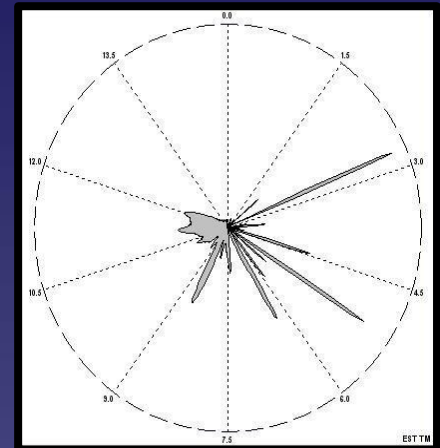
Pork



Chicken



Beef



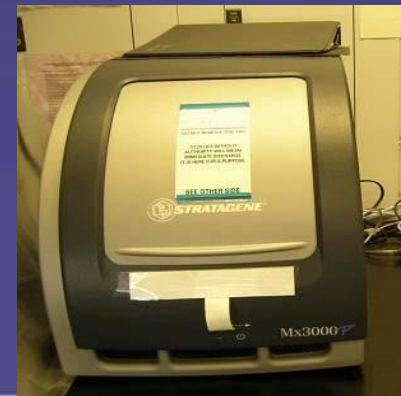
Mutton

Typical chromatograms of four different types of meat. Pork showed more aromatic compound corresponding to the number of peaks.

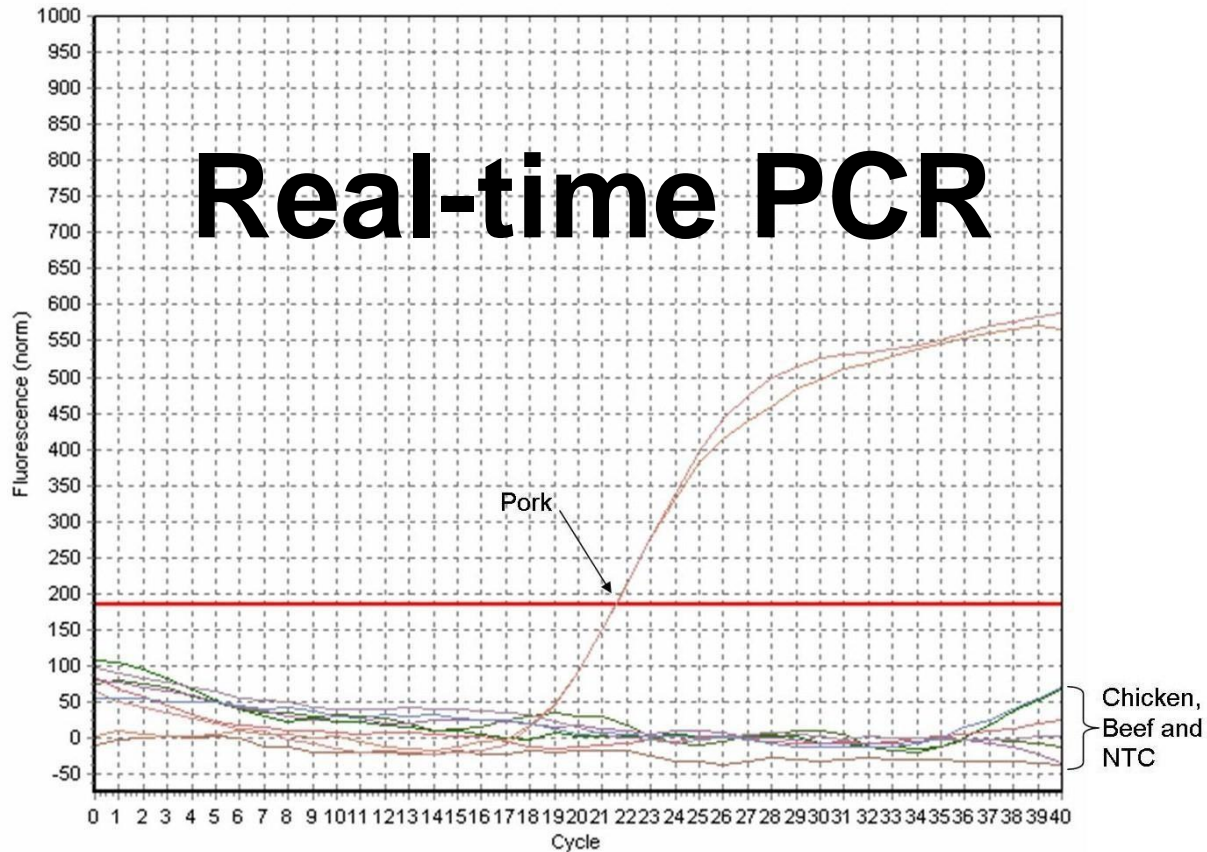
Nurjuliana, et. al. Meat Sc (2010)



Molecular Biology Techniques



Real-time PCR

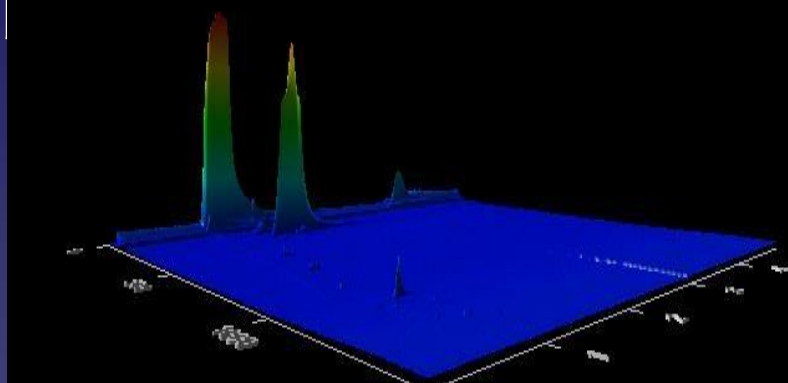


Specificity test on pork primer designed against other meat species (beef and chicken).

Distinguishing industrial alcohol and alcoholic beverage using GCxGC-ToF-MS

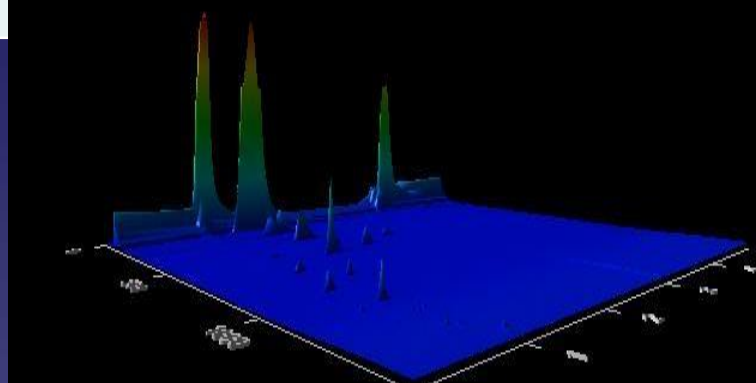
Masses: TIC

industrial alcohol (95%)



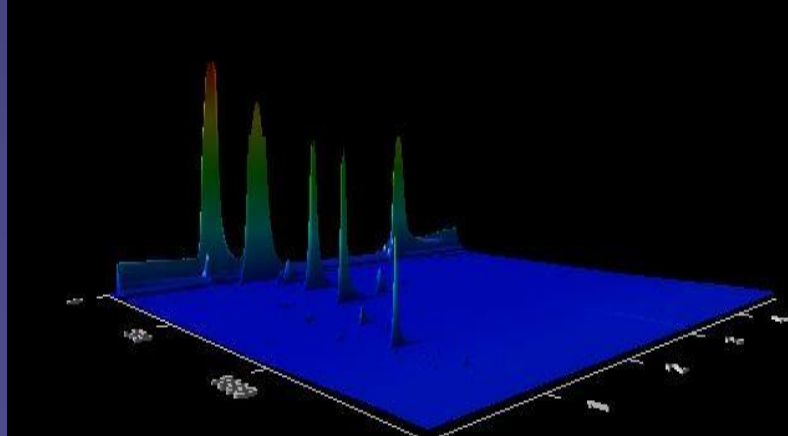
Masses: TIC

red wine



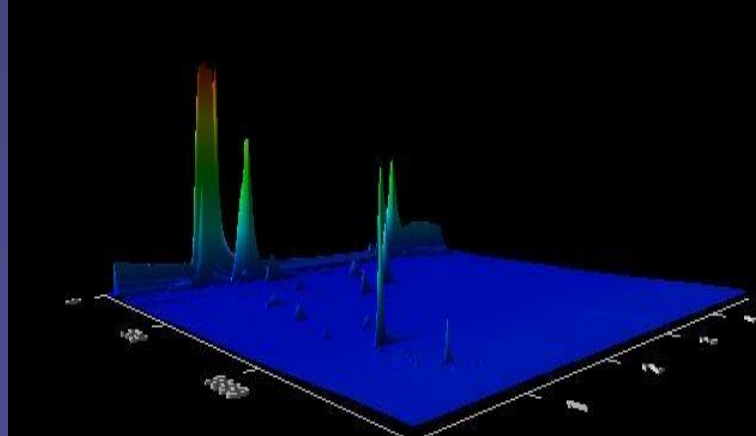
Masses: TIC

white wine



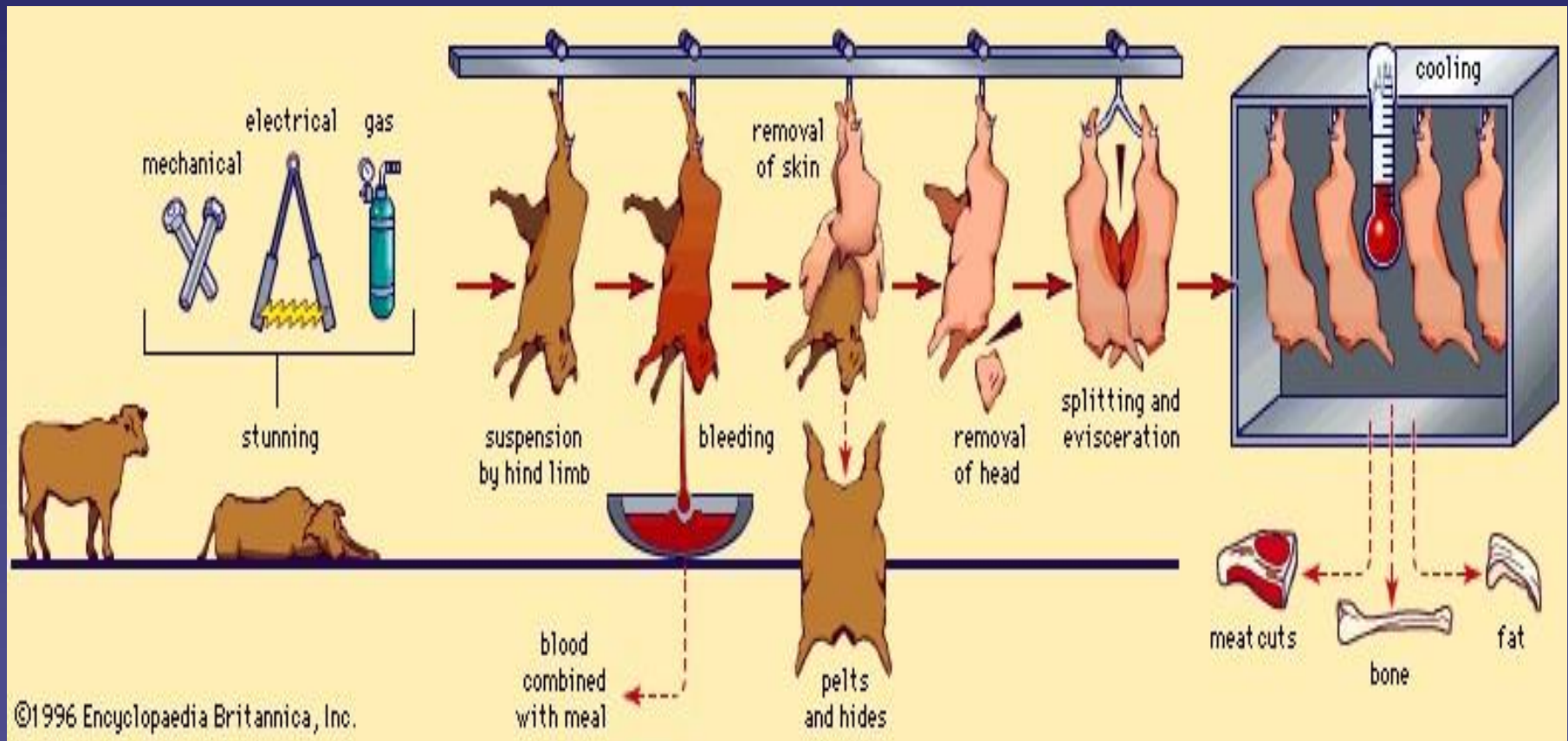
Masses: TIC

cooking wine



TYPES OF STUNNING

1. Mechanical stunning
2. Electrical stunning
3. Chemical stunning (gas)
4. Pneumatic Stunning



HALAL PURIFICATION PRACTICE



SERTU – A HYGIENE PRACTICE IN SURFACE TREATMENT.



7x WASH



ANALYTICAL	HAEMATOLOGY	BIOMONITORING	MICROBIOLOGY
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CERTIFICATE OF ANALYSIS

Cust. Ref. No. : NP300615
 Lab. Ref. No. : L1-00600615
 Issue Date : 13 Jul 2015

Specimen submitted by
Nippon Express (MALAYSIA) Sdn Bhd
 on 30 Jun 2015 with the following details :
 Facility : North Port (Malaysia) Berhad
 User/Client : Nippon Express (Malaysia) Sdn Bhd
 Authorized Sertu Provider : Global Dibaigh Sdn Bhd
 Bill to : Global Dibaigh Sdn Bhd
 ID : B (Pre-Sertu)
 A (Post-Sertu)
 Sample Type : Environmental Swabs (20' Footer Dry Type Container)
 Date of Sampling : 30 Jun 2015

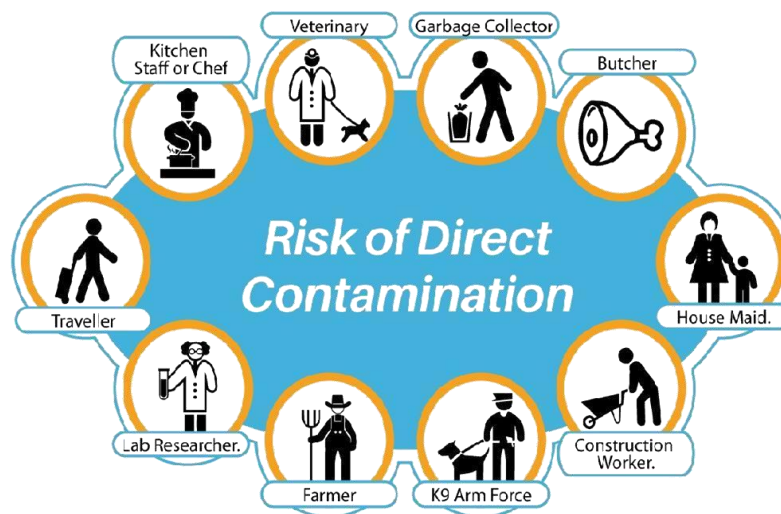
Parameter	Results		Test Method
	B (Pre-Sertu)	A (Post-Sertu)	
Total Bacteria Count	4×10^5 <small>(100,000 colony forming unit/50cm sq)</small>	5 <small>(1 colony forming unit/50 cm sq)</small>	[Spread Plate Method, CFU/50 cm sq] [APHA 3.5.1, 37°C, 48h, PCA]

Rahmah Ab. Rahman
 Managing Director
 OPHL HOLDINGS (M) SDN BHD

This report refers to the tested sample only. Sampling is not carried out by our organization. All analysis is carried out by the fact of our knowledge and ability and our responsibility is limited to the correctness of the results. This report shall not be reproduced except in full or in part without written approval of the laboratory.

Microbiology Lab - 41-2-02, Jalan Medan Pusat, Sekebang 4, 43000 Sekebang, Selangor Darul Ehsan. Tel: 03-93263277 Fax: 03-93263278
 Website: www.ophl.com.my

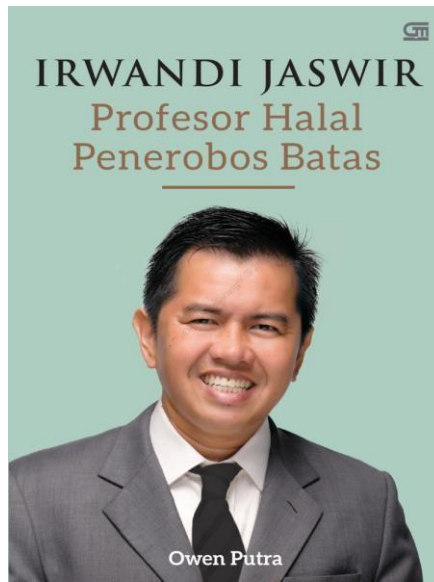
SERTU LIQUID DETERGENT – PERSONAL CARE USAGE



tahra™

KNAPSACK SPRAYER / BACK PACK SPRAYER.







2018



1980



1997



2011



2015



THANK YOU