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INSTITUT PENYELIDIKAN PRODUK HALAL (IPPH)

"Upholding the sanctity of Halal through research and services"

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Director's Message

السلام عليكم ورحمة الله وبركاته

Alhamdulillah we praise Allah SWT for His blessings on to us that we are able to proceed with our life and will continue on with great vigour. Again I would like to take the opportunity to express my greatest appreciation to everybody who has contributed to the wellbeing and smooth running of our Institute.

One of the great challenges in ensuring the sanctity of Halal is safe guarded, is to put the importance of quality high in the priority list. This is indeed in line with the concept of Halal as we always envisaged, namely the concept of 'Halalan Toyyiban' which means Halal and quality. To ensure the integrity of Halal is being safe guarded, there must be systems in place which include standards, certification, education, training, research and consultancy. One of our main strengths is in research, this is where we put the aspect of quality into position. From the researches done in our laboratories looking at alternative halal products, new method of Halal analyses or even new policies or guidelines pertaining to Halal matters, we apply these in our services rendered to the society. Here we are glad to state that through our zealous effort and full commitment, we are about to receive recognition or to be more exact accreditation on six methods of analyses that were developed in-house through the laboratory accreditation of ISO 17025. That is quality being recognized.



Prof. Dr. Russly Abd Rahman
Director

Brothers and sisters, we need the contribution of everybody in carrying out this work on Halal. We have to cooperate, collaborate and work together. In this respect we have made an effort to work collectively and recently we managed to form a consortium working on Halal research and education in Malaysia termed as NaHREC. The first meeting of this consortium was held in IPPH on 26th September 2013 and was unanimously agreed that IPPH represented by its Director as the first chairman of the Consortium for the next three years. Also, I would also like to take this opportunity to announce that one of our staff Prof. Madya Dzulkifly Mat Hashim has been appointed by DYMM Yang DiPertuan Agong as a member of Jawatan Kuasa Fatwa Majlis Kebangsaan (Fatwa Committee National Council) representing the scientific community. These are some of our small contributions to the Halal efforts in Malaysia.

Lastly I would like to take this opportunity to thank everybody for their efforts and contributions in ensuring the publication of our InfoHalal is continued on. Wallahua'lam.

INSIDES

Director's Message	1
Editor's Note	2
Researcher's Profile	3
Product Highlight	4
Publication	5 - 7
Scholar's Note	8
Staff's Profile	9
HPRI Activities	10 - 13
Student's Profile.....	14-15
Chart	16
Services	17
MIHREC.....	18 - 19

MIHREC 2014

*Innovation For A Sustainable
Halal Industry*

Organizer :



HALAL PRODUCTS RESEARCH INSTITUTE
UNIVERSITI PUTRA MALAYSIA

**MALAYSIA INTERNATIONAL HALAL
RESEARCH AND EDUCATION
CONFERENCE**

DECEMBER 2-4

2014

<http://www.mihrec2014.upm.edu.my>



Editor's Note

PROF. DR. SHUHAIMI MUSTAFA
Deputy Director

السلام عليكم ورحمة الله وبركاته



Halal consulting, halal training and halal services offer a lucrative business opportunity around the globe. These mostly driven by the recent extraordinary interest and request from non-Muslim countries such as Japan, Korea, China and South American in advising them to produce halal products. Such countries oversee the need and opportunity to diversify their products to cater for approximately 2 billion Muslim populations all over the world. Therefore, a comprehensive halal consulting and training modules together with highly skilled and knowledgeable halal experts are of paramount important to position Malaysia as one-stop centre for halal industry.



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TECHNICAL :

Mohd Salehan Sanusi

Hence, IPPH is committed to join forces with other relevant agencies such as HDC, JAKIM and other universities to materialise the government's halal agenda through its post-graduate studies, research programs and analytical services. Halal Science and Management is one of the research clusters in UPM that was established to spur the research activities in the area of Shariah, halal product traceability, innovation, laws and management. Outputs from these research activities include graduate students, patents, trademarks, journals, books, proceedings and validated analytical methods for halal authenticity as highlighted in this Infohalal issue.

"Upholding the sanctity of Halal through research and services"



Researcher's Profile

DR. FAKHRUL ZAMAN ROKHANI

Fakhrul Zaman Rokhani received the B.S. degree in Electrical and Mechatronic Engineering from the University of Technology Malaysia, Johor, in 2001, and the M.S. and Ph.D. degree in Electrical Engineering from the University of Minnesota, Minneapolis, in 2004 and 2008 respectively.

In 2001, he was with Malaysian Institute of Microelectronic System (MIMOS) Malaysia. He is currently a faculty member with the Department of Computer and Communication System Engineering, Universiti Putra Malaysia. In 2010 he was a visiting scholar at the ASIC & Systems State Key Lab in Fudan University, China. In Jun 2010, he spent 14 months at Intel Penang Design Center as a Visiting Professor where he worked on designing the next generation chipset on 32nm technology. In August 2012, he was appointed as a visiting lecturer at Al-Neelain University, Sudan teaching advanced course on Embedded Computer Architecture.

His current research interests include rapid and low cost sensor and system design for Halal application, intelligent system design and low-power and high-performance system-on-Chip (SoC) design. He has published in top-tier journals in his research areas and received public and private research grants and awards including Intel Corp., Silterra Sdn. Bhd., Symmid Corp. and Crest.

He is currently a Vice-Chair in the IEEE Consumer Electronics Society Malaysia Chapter, committee in the IEEE Circuits and Systems Society Malaysia Chapter, member of GoldenKey and was a Treasurer for the IEEE Graduate of the Last Decade (GOLD) for 2010-2011. He serves on the technical program committees and reviewers for many IEEE conferences. In addition, he has chaired many sessions at regional and international conference in the areas of VLSI design.

Product Highlight

Patent Application: EG-2012050945
International Application No.: PCT/EG2013/000011
International Publication Number: WO/2013/178233
Publication Date: 05.12.2013

Pyramidal Package as a Novel Green and Sustainable Multi-purpose Food Packaging Technique

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A notable change of quality and increase in the cost of water-treatment devices has resulted from the current water-treatment techniques in the food industry, also most current packaging and preservation techniques cause a negative effects on human health, reduction in quality and a loss of vitamins and nutrients, therefore a top priority in food sciences has been the elucidation of alternative, less stringent techniques. The Pyramid shape technique combines preservation, packaging and water treatment in one process and is poised to be a useful tool to the food industry. The Pyramid shape technique creates a unique opportunity for both food manufacturers and consumers to package, preserve and produce a new kind of structured water that has many beneficial effects for human health. This novel technique involves the use of packaging and containers made of dielectric materials such as plastic, fiberglass and paper molded into the form of a square pyramid with a specific slope angle of 52 degrees. Two sides of the package must be oriented to the Earth's North-South magnetic field. The new technique, based on the effect of packaging shape on biological and non biological objects. The low frequency magnetic field that imparts from the pyramidal package is the responsible factor for the alteration of water's crystallization mode and molecular structure in addition to the preservative effect without any other physical or chemical treatment. The effects of pyramid-shaped packages on mineral water were studied by examining ice surface morphology. Ice surface morphology was examined by variable pressure scanning electron microscopy VP-SEM, the effect on water's molecular structure was determined by nuclear magnetic resonance spectroscopy (NMR) and the preservation efficacy of the new technique was assessed by various parameters such as pH and bacterial count. VP-SEM micrographs have shown that the pyramid shaped package promotes the formation of filament-shaped crystals, and reduction of solid

substrate-bound crystals, this reduction has many benefits such as preventing the scale formation in water pipes, also it helps for improving the absorbance of water minerals in stomach. NMR analysis has shown that pyramidal packages changed the cluster size of water's molecules. The microorganism's growth has been inhibited under the effect of pyramidal packages. These results provide evidence that pyramidal packages works as a multipurpose packaging technique.

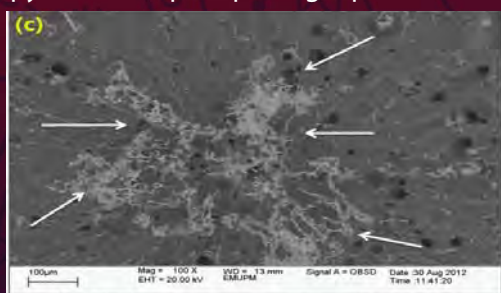


Fig.4. (c):VP-SEM micrographs of commercial natural mineral water samples at -12 degree Celsius and 100 Pa that placed inside a rectangular shape container made of PMMA for 24 hours

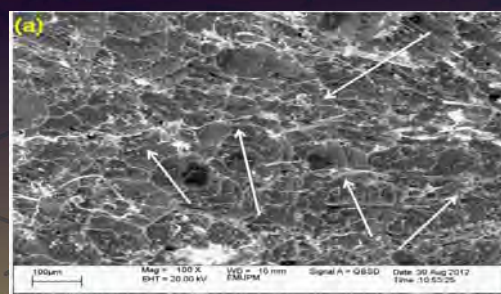
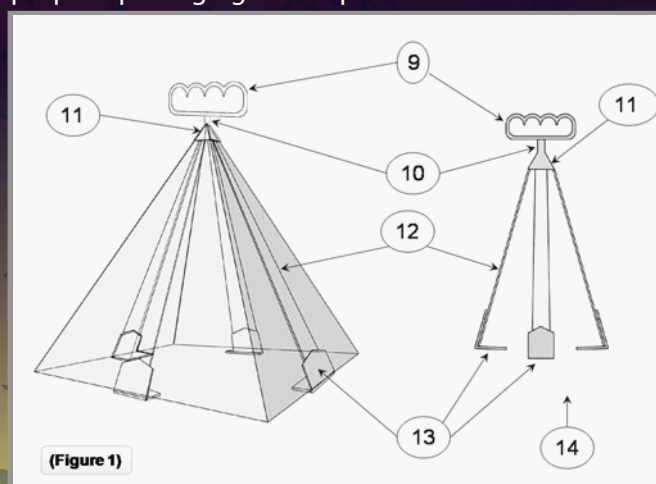


Fig.4. (a):VP-SEM micrographs of commercial natural mineral water samples at -12 degree Celsius and 100 Pa that placed inside pyramid shape container made of PMMA for 24 hours





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Review

Comparison of gene nature used in real-time PCR for porcine identification and quantification: A review

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ABSTRACT

Pork adulteration has been a major concern nowadays for Halal verification. Unintentional pork inclusion by contamination in highly processed food materials involves a minute amount of porcine DNA to be detected, emphasizing the need of specific and sensitive method for porcine detection. Real-time PCR is a widely used technique for species identification that can serve this purpose besides providing a powerful quantification method. Incorporation of a highly sensitive and specific probe can greatly improve the specificity and sensitivity of the assay. However, derivation of PCR primers, either from nuclear DNA (nDNA) or mitochondrial DNA (mtDNA) can relatively affect the sensitivity and specificity of the reaction as well as the quantitative measurement. In this review, both types of DNA are compared in terms of their characteristics and their influence on species identification and quantification using real-time PCR.

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Contents

1. Introduction	330
1.1. Background	330
1.2. PCR-based porcine identification method	331
2. Nuclear and mitochondrial DNA	332
2.1. General characteristics	332
2.2. Genes used for species identification	333
3. Influence of nature of target gene on real-time PCR based identification	335
4. Influence of the nature of target gene in real-time PCR based DNA quantification	336
5. Conclusion	337
References	337

1. Introduction

1.1. Background

Identification of porcine species in food products has been a major concern nowadays in determining the Halal status of the food products

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being marketed. The responsible authorities have been challenged by the complexity of the food product itself and the availability of highly sensitive and specific porcine identification method.

The Muslim population has been very doubtful of the Halal status of the food products in the market due to pork adulteration. Products that contain any amount of porcine will be considered as Haram and cannot be consumed at any level by the Muslim. Thus, it is a great concern to be able to detect the presence of porcine at the smallest amount, emphasizing the need of highly sensitive and specific porcine identification method.

Porcine inclusion in food products can occur at any step in the production chain, either during or after processing and manufacturing.

Application of FTIR-ATR Spectroscopy Coupled with Multivariate Analysis for Rapid Estimation of Butter Adulteration

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Abstract: In dairy product sector, butter is one of the potential sources of fat soluble vitamins, namely vitamin A, D, E, K; consequently, butter is taken into account as high valuable price from other dairy products. This fact has attracted unscrupulous market players to blind butter with other animal fats to gain economic profit. Animal fats like mutton fat (MF) are potential to be mixed with butter due to the similarity in terms of fatty acid composition. This study focused on the application of FTIR-ATR spectroscopy in conjunction with chemometrics for classification and quantification of MF as adulterant in butter. The FTIR spectral region of 3910-710 cm^{-1} was used for classification between butter and butter blended with MF at various concentrations with the aid of discriminant analysis (DA). DA is able to classify butter and adulterated butter without any mistakenly grouped. For quantitative analysis, partial least square (PLS) regression was used to develop a calibration model at the frequency regions of 3910-710 cm^{-1} . The equation obtained for the relationship between actual value of MF and FTIR predicted values of MF in PLS calibration model was $y = 0.998x + 1.033$, with the values of coefficient of determination (R^2) and root mean square error of calibration are 0.998 and 0.046% (v/v), respectively. The PLS calibration model was subsequently used for the prediction of independent samples containing butter in the binary mixtures with MF. Using 9 principal components, root mean square error of prediction (RMSEP) is 1.68% (v/v). The results showed that FTIR spectroscopy can be used for the classification and quantification of MF in butter formulation for verification purposes.

Key words: FTIR spectroscopy, butter, mutton fat, discriminant analysis, partial least square

1 INTRODUCTION

Today, butter is one of the emerging dairy products in the market owing to nutritional benefits effects to human. Butter contains protein, calcium and phosphorus. The main vitamins in butter include vitamin A, D, E and vitamin K. Additional nutrients in butter include fatty acids, lactones, methyl ketones as well as dimethyl and diacetyl sulfide. Eventhough butter is high in fat, this fat features heart-healthy fats, which have shown to lower cholesterol, prevent certain cancers, and prevent the spread or growth of tumors. Butter contains the easiest forms of vitamin A to

absorb. Vitamin A promotes good vision, a healthy thyroid and adrenal health. Butter also contains antioxidants, specifically selenium, which protects the body from free radical damage.

The denomination "butter" is reserved for the product exclusively and directly obtained from cream extracted from cow's milk and to the product obtained from cow's whey, as well as their mix which responds to the specific chemical, physical, and organoleptic requirements¹⁾. It is one of the most expensive fats that have elevated standards of quality. In this connection, the European Commu-

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Review

Stunning and animal welfare from Islamic and scientific perspectives



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ABSTRACT

The transformation of an animal into pieces fit for human consumption is a very important operation. Rather than argue about halal slaughter without stunning being inhumane or stunning being controversial from the Islamic point of view, we discuss slaughter, stunning and animal welfare considering both Islamic and animal welfare legislation requirements. With the world Muslim population close to two billion, the provision of halal meat for the Muslim community is important both ethically and economically. However, from the animal welfare standard point of view, a number of issues have been raised about halal slaughter without stunning, particularly, about stressful methods of restraint and the latency of the onset of unconsciousness. This paper sets out to, discuss the methods of stunning that are acceptable by Islamic authorities, highlight the requirements for stunning to be acceptable in Islam and suggest practical ways to improve the humanness of slaughter.

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Contents

1. Introduction	353
2. Why do Muslims practice halal slaughtering?	353
3. Welfare concerns about halal slaughter without stunning	354
4. Importance of stunning	354
5. Conditions for stunning to be accepted in Islam	355
6. Methods of stunning accepted in Islam	355
7. Halal compliant stunning methods for different animals	356
8. Halal compliant stunning methods for cattle	356
9. Non-penetrating captive bolt stunning	356
10. Head-only electrical stunning	357
11. Halal compliant stunning methods for goats	357
12. Halal compliant stunning methods for sheep	357
13. Non-penetrating captive bolt stunning	358
14. Head-only electrical stunning	358
15. Halal compliant stunning methods for poultry	358
16. Accepted stunning methods for ostriches	358
17. Ways to improve humaneness of halal slaughtering without stunning	359
18. Conclusion	359

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Scholar's Note

FOOD EMULSIFIERS AND AUTHENTICITY ISSUE

by : Dr. Mohammed Nazrim Marikkar
(Associate Researcher)

Emulsifiers are food additives that facilitate normally immiscible liquids such as oil and water to form stable emulsions. Emulsifiers can improve the surface tension between various components of the emulsion system to make it a uniform dispersion to prolong the storage period of food and improve taste and appearance. They are included in fat based products such as salad dressing and often more in low fat formulations products such as frozen desserts. They are also used in bread and bakery products, and convenience snacks and microwaveable food products. Among the different types of emulsifiers, MAG, DAG, and their derivatives constitute more than 70% of the worldwide emulsifiers. Fats and oils are the raw materials for MAG and DAG production where chemical glycerolysis is usually employed as a method of preparation.

Food labeling and E code issue

One of the functions of food labeling regulations is to ensure that consumers receive adequate information about the food products to make the right choice. However, in the case of food additives, E-numbers are assigned instead of mentioning the exact name of a particular additive. Use of E-numbers in food labeling is an initiative by the European Union (EU), which is universally adopted by the food industry. According to European Union (EU) classification, MAG and DAG used as food emulsifiers are needed to be identified with the number E471. However, E-numbers of various food additives used by the food industry do not clearly state whether they are derived from animal or plant sources. According to some past reports, some of the commercially available MAG and DAG could have been derived from hydrogenated lard, which is a prohibitive item under halal and kosher food regulations. From the religious perspective, use of ingredients derived from animal sources is not permissible for Muslim consumers. For example, if the label reads that a product contains E471, it is doubtful because most of the time the source of MAG and DAG is not revealed. Through clear and proper labeling, consumers could verify themselves whether the products status is either halal, haram, or doubtful.

Halal Issues connected to emulsifiers

The halal status of E471 emulsifiers becomes questionable, if the source of origin of MAG and DAG is not declared. The issue has grown in importance in light of many recent issues connected with the use of E471 emulsifiers in certain food products such as coffee and mayonnaise. Also, there are some speculations that E471 in some commercial brand of chocolate could have been of MAG-DAG of animal origin. In this kind of instances, it may be necessary to have analytical methodologies that can help to trace the source of origin of emulsifiers.

Towards halal authentication of emulsifiers

For this purpose, it is necessary to have a database on the characteristic properties of mono- and diacyl-glycerol derived from different plant and animal based fatty materials. Mono- and diacyl-glycerol emulsifiers of both plant and animal fats can be prepared using chemical glycerolysis method. For the characterization purpose, modern analytical techniques including two dimensional gas chromatography hyphenated with time-of-flight mass spectrometry (GC-TOF-MS), Differential Scanning Calorimetry (DSC) and Liquid chromatography hyphenated with mass spectrometry (LC-MS) can be used. The data collected can form a comprehensive source document for future references with regard to the authenticity of market available commercial emulsifiers.

Achievements

Exhibition	Project Title	Award	Researcher
International Invention, Innovation & Technology Exhibition (ITEX) 2013	"Pyramidal Package as a novel green and sustainable food packaging, preservation and water treatment technique"	GOLD	Maher Abdelaleem Abdelrazik Abdelsamie, Russly Abdul Rahman, Shuhaimi Mustafa & Dzulkifly Mat Hashim
	"Islamic Cleansing Clay for Halal Industry"	SILVER	Puziah Hashim, Norrahimah Kassim, Dzulkifly Mat Hashim & Hamdan Jol
Malaysia Innovation Expo (MIExpo 2013)	Identification of polypeptide biomarkers of porcine gelatin using two-dimensional electrophoresis	SILVER	Aina Mohd Amin, Amin Ismail, Raja Mohd Hafidz Raja Nhari & Yaakob Che Man
Korea Cyber International Genius Inventor Fair, CIGIF 2013	"Pyramidal Package as a novel green and sustainable food packaging, preservation and water treatment technique"	GOLD & Special Award	Maher Abdelaleem Abdelrazik Abdelsamie & Russly Abdul Rahman,

Congratulation !!

"Anugerah Staff Cemerlang dalam Jaringan Industri Berimpak Tinggi 2013" was recieved by Fariyah Liyana Khalid (Science Officer) , Laboratory of Halal Services .



Staff Profile



Rohaya Ibrahim

Science Officer, Laboratory of Halal Services

Education:

2012 - Master of Science (Oncology), Institute Bioscience, UPM

2003 - Bachelor of Science (Biotechnology), Faculty of Food Science & Biotechnology, UPM

Experience and career highlights:

- Develop documents for lab accreditation on MS ISO/IEC 17025:2005
- DNA/RNA Extraction from food, blood, tissue and cell.
- Animal Cell Culture Techniques (MTT Assay, AO/PI Staining, Gel Electrophoresis, Tunnel Assay, Electron Microscopy, Flow Cytometry)

Research interest

Molecular Biology, Neurological Research, Animal Cell Culture, Virus Work.

ACTIVITIES 2013

	Date	Activities	Location
JAN	4-7	3rd International Conference On Food Technology (INCOFTECH) 2013	India
	19-26	2nd Gulf Conference on Halal Industry and Its Services; Towards an Effective Management of The Halal Industry	Kuwait
FEB	4-5	Sixth IMT -GT Working Group Meeting on Halal Products and Services (WGHAPAS)	Thailand
	21-23	MTE Exhibition and Conference	PWTC, Kuala Lumpur
MAC	5-7	<i>Dialog Intelektual Fatwa Kali ke-3 (DIF-3)</i>	Sunway Putra Hotel , KL
	26	<i>Majlis Pelancaran Halal Square dan Halal Inside</i>	Dewan Tabung haji, Ibu Pejabat Tabung Haji KL
APRIL	3	Official Opening World Halal Week KL	KLCC, Kuala Lumpur
	4	Visit By Ministry Of Foreign Affairs Of Thailand To UPM	IPPH, UPM
	24	<i>Seminar Keusahawanan, Kepenggunaan & Penguatkuasaan Halal Negeri Selangor 2013</i>	FPSK, UPM
MAY	7-11	The 1st International Symposium on Food Halalness -FOOD HALALNESS IN AND AROUND SOUTHEAST ASIA-	Tokyo Tech Front (Kuramae Kaikan), Japan.
	14	<i>Lawatan delegasi Higher Education Council, Turkey</i>	IPPH, UPM
JUN	30 mei-6	<i>Festival Makanan Halal 2013</i>	Daerah Xian, China
	12	<i>Lawatan Timbalan Rektor, Universiti Nizwa, Oman</i>	IPPH, UPM
JULY	3	Seminar Of Food Safety 2013	Cititel, Mid Valley
	18	<i>Bengkel Pemurnian Draf Manuskrip IPPH 2013</i>	Hotel Residence UNITEN
AUG	14-15	HASIB 2013	Chulalongkorn University Thailand
	19 - 20	International Functional Food Conference	Cyberview Resort and Spa, Cyberjaya
	29	<i>Lawatan Delegasi Universitas Sumatera Utara (USU), Indonesia</i>	IPPH
SEPT	4	<i>Klinik Usahawan PKNS</i>	Hotel De Palma, Shah Alam
	6	<i>Pembentangan Pelajar Latihan Industri</i>	IPPH, UPM
	24	<i>Majlis Perasmian Konvensyen Penguatkuasa Halal Malaysia Peringkat Kebangsaan Tahun 2013</i>	Grand Ballroom, Grand Season KL
OCT	7-8	Malaysian International Cocoa Conference (MICC)	Sunway Pyramid
	10-12	Global Entrepreneurship Summit 2013 (Ges)	KLCC, Kuala Lumpur
	29 - 31	9th World Islamic Economic Forum (WIEF 2013) LONDON	London
NOV	6	<i>Bengkel Pemantapan Program Analisis Mikrobiologi Dan Kimia Makanan</i>	Palm garden hotel
	7	3 Minutes Thesis Competition	IPPH, UPM
DEC	10	Wacana "Intelligent Quality Assurance Modelling for Halal Food Integrity (I-Haqam)"	Palm Garden Hotel, Putrajaya
	19	Seminar Research Proposal	IPPH, UPM

Welcome Visitors to IPPH



19 Feb - Asia Uninet



18 May - Universitas Yarsi, Indonesia



5 April- The Central Islamic Council of Thailand



3 May - University Maejo, Thailand



16 May - Delegates from Tunisia



7 Dis - European Union SECUREFISH group members

Seminar / Workshop



31 Jan - Mesyuarat Semakan Pengurusan (MRM) IPPH



8 July - Bengkel Pemurniaan Draf manuskrip IPPH



21&27 Nov - Kursus pertolongan Cemas



Staff Activities



11 Jan - Lawatan Muhibbah ahli Pengurusan IPPH ke Bahagian Hub Halal Jakim



19 Dis - Lawatan ke UNISSA, Brunei



30 Aug - Hari Raya celebration



23 Oct - Halal for you (4U) program in Sekolah Kebangsaan Padang Jawa, Shah Alam



5 Dec - ERT Training



19 Dis - Program Kecemerlangan Diri dan Malam Apresiasi IPPH 2013

Exhibitions



3-4 April - Pameran Sidang ke-52 MABBIM dan Seminar Kebahasaan



25 May - Pameran Siswazah





Student's Profile



Ahmad Shauki Bin Zakaria

Doctor of Philosophy in Halal Science Products

Research Title : Identification and Characterization of Bacterial Surface Protein (s) that Specifically Bind to Placental Collagens.



Azilawati Mohd Ismail

Master of Science in Halal Science Products

Research Title : Developments on HPLC Methods and Chemometric Approaches for Amino Acid in Gelatin From Different Sources



Noor Jaini Binti Latif

Master of Science in Halal Science Analysis

Research Title : Determination of Toxigenic Fungi and Aflatoxin in Fish Feed Collected From Aquaculture Farm In Selangor, Malaysia.



Nor Nadiha Mohd Zaki

Doctor of Philosophy in Halal Science Products

Research Title : Utilization of Leucaena Leucocephala as Renewable Biopolymer



Nur Azira Tukiran

Doctor of Philosophy in Halal Science Products

Research Title : Development of Detection Methods for Gelatin Biomarkers based on Proteomics and Immunoassay Approaches



Nur Farhana Abd. Rahman

Master of Science in Halal Science Products

Research Title : Characterization and Functional Properties of Pectin Derived from Okra (Abelmoschus Esculentus (L.) Moench) Leaves, Pulp and Seeds.

Student's Profile



Ummi Kalthum Hanapi

Doctor of Philosophy in Halal Products Science
Research Title : Development and Evaluation of Sensitive DNA-Based Techniques for Fraudulent Substitution of Meats and Meat Products



Kamilah Nazifah binti Kamin

Master of Science in Halal Science Products
Research Title : A Comparative Study of Polycyclic Aromatic Hydrocarbons (PAHs) in Aquacultured Fish in Selangor



Nur Juliana Mokhtar

Programme: Doctor of Philosophy in Halal Science Analysis
Research Title : Research Tittle: Authentication of Meat and Meat based product

Student's Activities



BIL	DATE	ACTIVITY
1	21 st MARCH 2013	NEW POSTGRADUATE BRIEFING DAY FOR SECOND SEMESTER 2012/2013
2	28 th MAY 2013	SEMINAR RESEARCH PROPOSAL FOR SECOND SEMESTER 2012/2013
3	8 th JULY 2013	"BENGKEL PEMURNIAN DRAF MANUSKRIP IPPH 2013"
4	19 th SEPT 2013	NEW POSTGRADUATE BRIEFING DAY FOR FIRST SEMESTER 2013/2014
5	20 th SEPT 2013	THE 1 st IPPH POSTGRADUATE STUDENT RESEARCH COLOQUIUM
6	7 th NOV 2013	THREE MINUTE THESIS COMPETITION IPPH
7	19 th Dec 2013	SEMINAR RESEARCH PROPOSAL FOR FIRST SEMESTER 2013/2014



Halal Services Laboratory

The UPM Halal Services Laboratory was established in 2010 as a testing laboratory and specialised in halal analysis using state-of-the-art equipment and facilities. The laboratory's range of services span the entire supply chain of halal food and selected non-food products. The Halal Services Laboratory also provides consulting services and training. Services offered are open to government agencies, private industries and also the public.

The types of analytical services offered are :

Testing
Services

Test	Sample	Cost/sample (RM)
Porcine DNA detection (DNA extraction and detection using Real-time Polymerase Chain	Meat products, Animal feed Processed food	600.00
Alcohol content	Beverage ,Food , Processed food Consumer products	350.00
Fatty acid methyl ester (FAME)	Food, Processed food Consumer products	300.00
Amino acid profile	Raw gelatine, Gelatine capsule Tablet coating, Processed food Raw food ingredients	630.00
Amino acid profile and origin	Gelatine products, Collagen Capsule	750.00
Screening test (porcine detection)	Meat products (raw and processed)	380.00

Results and reporting

Results are reported by conventional hard copy formats. Depending on the customers need, the reports can be faxed, phoned, e-mailed or provided as hard copies. Individual samples and results may be discussed with the staff involved in the process of analysing the samples.

CONTACT

Halal Services Laboratory
Halal Products Research Institute
Putra Infoport
Universiti Putra Malaysia
43400 UPM Serdang, Selangor.

Phone : 603-8947 1841/1830/1831/1833
Fax : 603-8947 1834

Email : halalserviceslab@gmail.com
Web : halal.upm.edu.my

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Innovation for a Sustainable Halal Industry

organized by:
UPM UNIVERSITI PUTRA MALAYSIA
Halal Products Research Institute
Universiti Putra Malaysia

For enquiries please :
Phone : +603-8947 1034
+603-8947 1952
+603-8947 1036
Fax : +603-8943 9745
Email : secretariatmihrec@gmail.com

Venue :
Marriott Putrajaya Hotel, Malaysia



REGISTRATION FORM

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RESEARCH AND EDUCATION CONFERENCE 2014**
Marriott Putrajaya Hotel, MALAYSIA
2 - 4 DECEMBER 2014



I wish to attend as : ☐ Oral ☐ Poster presenter ☐ Participant

Name : _____

NRIC / Passport No : _____

Designation : _____

Organisation : _____

Address : _____

Contact No (Office / HP) : _____

Fax No : _____

E-mail Address : _____

Scope of Conference :

- ☐ Authentication and Traceability
☐ Products development
☐ Product Quality and Safety
☐ Shariah, Policy and Regulations
☐ Halal Economy
☐ Halal Education and Training
☐ Others : _____

METHOD OF PAYMENT

- 1) All bank drafts or cheques (Malaysians only) must be made payable to "Kira-kira Am UPM", crossed and mailed to the MIHREC2014 Secretariat. The details of the account :

Account no : 1215-0005004-050 (CIMB)
 Swift code : CIBBMYKL
 Bank : CIMB Bank, Universiti Putra Malaysia

- 2) Vote Transfer (UPM staff only)
 The account to be transferred is **6482700**

Please be inform that the secretariat once the transaction have been made, for the payment record and please bring the transaction copy on the registration day.

REGISTRATION FEES

DATES	International Participants	Malaysian Participants	Student**
Before @ on the 31 August 2014	USD 600.00 <input type="checkbox"/>	RM 1400.00 <input type="checkbox"/>	USD 280.00 / RM800.00 <input type="checkbox"/>
After 1 September 2014	USD 750.00 <input type="checkbox"/>	RM 1600.00 <input type="checkbox"/>	USD 300.00 / RM900.00 <input type="checkbox"/>

(/) Please tick where appropriate

* Fees are inclusive of conference materials, daily lunch and tea breaks . Additional package will be :

- ☐ Dinner - RM100.00/ USD 35
☐ Tour - RM50.00 / USD 20.00

** Must be accompanied by proof of studentship / signed letter from Head of Department.

Please send the completed registration form together with the **proof of payments** to:

Secretariat,
 Malaysia International Halal Research
 and Education Conference 2014,
 Halal Products Research Institute,
 Putra Infoport,
 43400 UPM Serdang,
 Selangor, Malaysia

Phone : (603) 8947 1034/1952/1036

Fax : (603) 89439745

Email : secretariatmihrec@gmail.com

Website : http://www.mihrec2014.upm.edu.my

IMPORTANT DATE

Abstract Submission Deadline	30 June 2014
Notification of Acceptance	31 July 2014
Camera-Ready Submission	30 September 2014
Late Registration After	1 September 2014
Conference Dates	2-4 December 2014

A photocopy form is acceptable



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UNIVERSITI PUTRA MALAYSIA
43400 UPM SERDANG SELANGOR**

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