

# CURRICULUM VITAE



## A. BUTIR-BUTIR PERIBADI *(Personal Details)*

Nama Penuh <i>(Full Name)</i>	NORHAYATI BT HUSSAIN		Gelaran <i>(Title)</i> : Assoc. Prof. Dr.
No. MyKad / No. Pasport <i>(Mykad No. / Passport No.)</i>	Warganegara <i>(Citizenship)</i>	Bangsa <i>(Race)</i>	Jantina <i>(Gender)</i>
	MALAYSIA	MELAYU	PEREMPUAN
Jawatan <i>(Designation)</i>	PENSYARAH	Tarikh Lahir <i>(Date of Birth)</i>	

Alamat Semasa <i>(Current Address)</i>	Jabatan/Fakulti <i>(Department/Faculty)</i>	E-mel dan URL <i>(E-mail Address and URL)</i>
FAKULTI SAINS & TEKNOLOGI MAKANAN, JABATAN TEKNOLOGI MAKANAN, UPM Serdang  Tel:03-89468536 Fax:03-89423552	FAKULTI SAINS & TEKNOLOGI MAKANAN, JABATAN TEKNOLOGI MAKANAN, UPM Serdang  Tel:03-89468536 Fax:03-89423552	E-mail: aryatihussain@upm.edu.my  H/P: 013-6299092

## B. KELAYAKAN AKADEMIK *(Academic Qualification)*

Nama Sijil / Kelayakan <i>(Certificate / Qualification obtained)</i>	Nama Sekolah Institusi <i>(Name of School / Institution)</i>	Tahun <i>(Year obtained)</i>	Bidang pengkhususan <i>(Area of Specialization)</i>
PhD	University Kebangsaan Malaysia, Bangi, Selangor	2010	Food Science
MSc	University Kebangsaan Malaysia, Bangi, Selangor	2005	Food Science
BSc	University of Strathclyde, Glasgow, United Kingdom	1996	Food Science and Microbiology

## C. KEMAHIRAN BAHASA *(Language Proficiency)*

Bahasa / Language	Lemah <i>Poor (1)</i>	Sederhana <i>Moderate (2)</i>	Baik <i>Good (3)</i>	Amat Baik <i>Very good (4)</i>	Cemerlang <i>Excellent (5)</i>
English			/		
Bahasa Melayu				/	
Chinese					
Lain-lain <i>(other)</i> :					

<b>D. PENGALAMAN SAINTIFIK DAN PENGKHUSUSAN</b> <i>(Scientific experience and Specialisation)</i>				
<i>Organization</i>	<i>Position</i>	<i>Start Date</i>	<i>End Date</i>	<i>Expertise</i>
Lembaga Koko Malaysia	Research Officer	2003	2011	Secondary Cocoa Processing (Chocolate processing)

<b>E. PEKERJAAN</b> <i>(Employment)</i>				
<i>Majikan / Employer</i>	<i>Jawatan / Designation</i>	<i>Jabatan / Department</i>	<i>Tarikh lantikan / Start Date</i>	<i>Tarikh tamat / Date Ended</i>
Marie France Bodyline, Mahkota Parade, Melaka	Nutritionist		1999	2001
SBM Food Industries, Merlimau, Melaka	Food Technologist		July 1997	December 1998
CPC/AJI (M) Sdn. Bhd., Segambut, Kuala Lumpur	Food Technologist		December 1996	June 1997

<b>F. ANUGERAH DAN HADIAH</b> <i>(Honours and Awards)</i>				
<i>Name of awards</i>	<i>Title</i>	<i>Award Authority</i>	<i>Award Type</i>	<i>Year</i>
<i>Academic Awards</i>	A. PhD scholarship from -Tabung Pembangunan Sains dan Teknologi.	Jabatan Perkhidmatan Awam, Malaysia	National	2007-2010
	B. BSc scholarship	MARA	National	1994 - 1996
<i>Non-Academic Awards</i>	A. Anugerah Perkhidmatan Cemerlang	Universiti Putra Malaysia	National	2012
	B. Anugerah Perkhidmatan Cemerlang	Lembaga Koko Malaysia.	National	2007
	C. Peserta Cemerlang Kursus Induksi Modul Umum	UiTM	National	2004
<i>Awards of Merit</i>	A. Silver Medal, Malaysia Technology Exhibition	Malaysia Association of Research Scientist	Malaysia Technology Exhibition (MTE)	2007
	B. Bronze Medal. Muhammad Anas O., Norhayati H.,	UPM	Poster Competition, UPM	2007

	<p>Suhaimi M., Loong Y.Y &amp; Mohd Yazid A.M. An in vitro study of the synbiotic potential of a probiotic preparation containing bifidobacterium pseudocatenulatum G4 and prebiotic (inulin and chocolates).</p> <p>C. International Patent No.: PCT/ MY 2007/000023 : Prebiotic chocolate and method for producing the same</p>	PCT		2007
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**G. SENARAI PENERBITAN (Sila masukan nama pengarang, tajuk, nama jurnal, jilid, muka surat dan tahun diterbitkan)** (*List of publications – author (s), title, journal, volume, page and year published*)

Journal	<p>Ida Madiha Y., Rukayadi Y., and <b>Norhayati H.</b> 2017. Effects of extraction condition on yield, total phenolic contents and antibacterial activity of methanolic Cinnamon zeylanicum Blume leaves extract. International Food Research Journal. International Food Research Journal. 24(2): 779-786.</p> <p>Choon Yoong Cheok, Noranizan Mohd Adzahan, Russly Abdul Rahman, Nur Hanani Zainal Abedin, <b>Norhayati Hussain</b>, Rabiha Sulaiman &amp; Gun Hean Chong. 2016. Reviews: Current Trends of Tropical Fruit Waste Utilization. Critical Reviews in Food Science and Nutrition. doi:10.1080/10408398.2016.1176009</p> <p>Roiaini, M., Seyed H. M., Jinap, S. and <b>Norhayati, H.</b> 2016. Effect of extraction methods on yield, oxidative value, phytosterols and antioxidant content of cocoa butter. International Food Research Journal 23(1): 47-54.</p> <p>Roiaini, M., Ardiannie, T. and <b>Norhayati, H.</b> 2015. Physicochemical properties of canola oil, olive oil and palm olein blends. International Food Research Journal 22(3): 1228-1234.</p> <p><b>H. Norhayati</b> &amp; M Roiaini. 2015. Effect of Different Solvents on Phytosterols and Antioxidant Activity of Cocoa Beans. International Journal of Food Engineering. 1:1:18-22</p> <p>Abdul Aris, M. H., Lee, H. Y., <b>Hussain, N.</b>, Ghazali, H., Mahyudin, N. A. Nordin, W. N. and Mahyudin N.A. 2015. Effect of Vietnamese coriander (<i>Persicaria odorata</i>), turmeric (<i>Curcuma longa</i>) and <i>asam</i> gelugor (<i>Garcinia atroviridis</i>) leaf on the microbiological quality of <i>gulai tempoyak</i> paste. International Food Research Journal 22(4): 1657-1661.</p> <p>Mahazar, N. H., Sufian, N. F., Meor Hussin, A. S., <b>Norhayati, H.</b>, Mathawan, M. and Rukayadi, Y. 2015. Candida sp. as a starter culture for cocoa (<i>Theobroma cacao</i> L.) beans fermentation. International Food Research Journal 22(5): 1783-1787</p> <p><b>H. Norhayati</b> &amp; A. Mohd Khan. 2014. Sensory Quality of Pilot Scales Prebiotic Chocolates in Malaysia. Sains Malaysiana. 43(9): 1333-1344.</p> <p>Siewsee Ng, Ola Lasekan, Kharidah Muhammad, Rabiha Sulaiman and <b>Norhayati</b></p>
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	<p><b>Hussain.</b> 2014. Effect of roasting conditions on color development and Fourier transform infrared spectroscopy (FTIR-ATR) analysis of Malaysian-grown tropical almond nuts (<i>Terminalia catappa</i> L.). <i>Chemistry Central Journal</i>. 8(55):1-11</p> <p><b>Norhayati H,</b> Rasma Suzielawanis I. &amp; Mohd Khan A. 2013. Effect of Storage Conditions on Quality of Prebiotic Dark Chocolate. <i>Mal J Nutr</i>. 19(1): 111 – 119.</p> <p><b>Norhayati H.,</b> Muhammad Anas. O. &amp; Mohd Khan A. 2012. Kesan Penggunaan Inulin dan Coklat Berinulin Terhadap Pertumbuhan <i>in vitro</i> Bifidobakteria. <i>Sains Malaysiana</i>. 41(10): 1223–1231</p> <p><b>Norhayati H.,</b> K.Rosmin, I.Rasma Suzielawanis, O.Muhammad Anas and A. Mohd Khan. 2008. Effects of prebiotic chocolates on some physicochemical properties, intestinal microflora of rat's digesta and their serum profile. <i>Journal of Science and Technology in the Tropics</i>. 4(1): 39-46.</p> <p><b>Norhayati H,</b> K.Rosmin, I.Rasma Suzielawanis, Yazid A.M. and A. Mohd Khan. 2008. Effect of inulin on texture, melting profile and sensory properties of sugar free milk chocolate. <i>Malaysian Cocoa Journal</i>. 4:20-24</p> <p>Muhammad Anas, O., Mohd Yazid A.M, <b>Norhayati, H.,</b> Loong, Y.Y &amp; Suhaimi, M. 2007. Fermentation of chocolate with inulin by bifidobacteria strains. <i>World Journal Of Microbiology and Biotechnology</i>.</p>
<i>Books/Monographs</i>	Norhayati Hussain. 2014. Ke arah penghasilan coklat bermutu- skala loji pandu. Penerbit Universiti Putra Malaysia.
<i>Chapter in book</i>	Chye F.Y & Lee J.S. 2010. Current research in food science and nutrition. In Chapter 9: <i>Effect of prebiotics on the physical properties and sensory evaluation of milk chocolates</i> . Penerbit Universiti Malaysia Sabah. pg 97-108.
<i>Proceedings</i>	<p>Halimatun Sa'adiah Abdul Halim, Siti Nurfitri Abdul Rahim &amp; <b>Norhayati Hussain.</b> 2015. Quality parameter of chocolate containing cocoa butter substitute. 2<sup>nd</sup> International Conference on Crop Improvement.</p> <p>Ida Madiha Yusoff, Yaya Rukayadi &amp; <b>Norhayati Hussain.</b> 2015. Optimisation of extraction yield, total phenolic contents and antibacterial activity of methanolic cinnamon zeylanicum blume leaves extract using Response Surface Methodology (RSM). 2<sup>nd</sup> International Conference on Crop Improvement.</p> <p>Nur Sadrina Mohamad, Rabiha Sulaiman, Lai Oi Ming &amp; <b>Norhayati Hussain.</b> 2015. Effect of peeling methods on physicochemical characteristics of Malaysia mango puree. 2<sup>nd</sup> International Conference on Crop Improvement.</p> <p><b>Norhayati Hussain</b> &amp; Roiaini Mohamad. 2015. Effect of Different Solvents on Phytosterols and Antioxidant Activity of Cocoa Beans. 5<sup>th</sup> International Conference on Biotechnology and Food Science. Istanbul, Turkey.</p> <p><b>Norhayati Hussain.</b> 2014. Application of Emulsifiers in Chocolate: A Short Review. Malaysia International Halal Research &amp; Education Conference 2014.</p> <p><b>Hussain N.,</b> Tukimin A., Yusoff I.M., &amp; Mohamad R. 2014. Physico-chemical characteristics of canola, olive and palm olein blends. 47<sup>th</sup> Annual AIFST Convention &amp; Exhibition.</p> <p>M Roiaini, M Hamed, S Jinap and <b>H Norhayati.</b> 2014. Effect of different extraction methods on yield, phytosterol composition and antioxidant activity of Malaysia cocoa beans. The 3<sup>rd</sup> International Symposium on Processing of Foods, Vegetables and Fruits.</p>

	<p>AR Raihana, K Roselina, S Rabiha and <b>H Norhayati</b>. 2014. Effect of hydrocolloids in mango filling stored at different storage conditions. The 3rd International Symposium on Processing of Foods, Vegetables and Fruits.</p> <p>AZ Md Dali, R Karim, J Selamat and <b>N Hussain</b>. 2014. Influence of fat in cocoa nibs and grinding on development of espresso cocoa drink. The 3rd International Symposium on Processing of Foods, Vegetables and Fruits.</p> <p>Nur Sadrina Mohamed, Raihana Abdul Razak, <b>Norhayati Hussain</b>, and Roselina Karim. 2014. Improvement and shelf life extension of fresh creams chocolate filling for Tolaal Enterprise. Persidangan Kebangsaan Kedua Program Pemindahan Ilmu (KTP 02).</p> <p><b>Norhayati H.</b>, Siti Hidayat, Aisyah Zafirah &amp; Roselina Karim. 2013. Effect of storage conditions and grinding sizes of cocoa nibs on cocoa espresso. 2<sup>nd</sup> World Congress of Food Science and Technology-2013.</p> <p><b>Norhayati H.</b>, Raihana Abdul Razak, Nur Sadrina Mohamed &amp; Roselina Karim. 2013. Improvement and shelf life extension of fresh creams chocolate filling for Tolaal Enterprise. Persidangan Kebangsaan Pertama Program Pemindahan Ilmu (KTP 01).</p> <p><b>Norhayati H.</b>, Yaya R. &amp; Mohd Khan A. 2012. Shelf-life stability of milk chocolate containing inulin. 4<sup>th</sup> International Conference and Biotechnology Advancing life sciences for health (anti aging development in particular) and food security.</p> <p><b>Norhayati H.</b>, Rosmin K. &amp; Mohd Khan A. 2012. Sensory evaluation and market survey of prebiotic chocolates produced by pilot plant scale in Malaysia. A sense of inspiration (5th European Conference on Sensory and Consumer Research).</p> <p>Mohd Khan A., <b>Norhayati H.</b> &amp; Rosmin K. 2010. Penilaian ciri-ciri fizikokimia, penerimaan dan hayat simpanan coklat prebiotik pra-komersil. Proceeding of International Seminar on Food and Agricultural Sciences.</p> <p><b>Norhayati H.</b>, Rosmin K., <sup>1</sup>Mohd Khan A. &amp; <sup>2</sup> Yazid A.M. 2007. Effect of a prebiotic on texture, melting profile and sensory properties of sugar free milk chocolate. Proceeding of the 10<sup>th</sup> Asean Food Conference 2007. Pg. 154.</p> <p><b>Norhayati H.</b>, Rosmin K., <sup>1</sup>Mohd Khan A. &amp; <sup>2</sup> Yazid A.M. 2007. Application of a prebiotic in milk chocolate. 2007. 12<sup>th</sup> Asean Chemical Congress. Pg. 174.</p> <p><b>Proceeding - Norhayati Hussain</b>, Rasmusuzielawanis Ismail and Mohd Yazid Abdul Manap. Nutritious Chocolate. 2006. Proceeding of The National Conference on Food Science and Nutrition 2006, 13-14 December 2006, Universiti Malaysia Sabah, Kota Kinabalu, Sabah.</p> <p><b>Proceeding – Norhayati H.</b> and A.M Yazid. 2005. Application of prebiotic in chocolate. Proceeding of The Malaysian International Cocoa Conference, 18-19 July 2005. Sunway Pyramid Convention Centre, K. Lumpur.</p>
<i>Other publications</i>	
<i>Computer software</i>	

#### **H. PROJEK PENYELIDIKAN TERDAHULU** (Past Research Project)

<i>Project No.</i>	<i>Project Title</i>	<i>Role</i>	<i>Year</i>	<i>Source of fund (Amount received)</i>	<i>Status</i>

9541800	Effect Of Different Roasting Conditions On Polycyclic Aromatic Hydrocarbons (Pah4) Content In Cocoa Bean	Project leader	Jun 17-Mei19	IPB (RM88,000)	On going
9537200	Characterization and In Vitro Bioavailability of Chia Seed Oil Rich in Omega 3 Fatty Acids Fractionated by Supercritical Fluid Extraction	Project leader	Jun 17-Mei19	IPS (RM20,000)	On going
-	Improvement of frozen curry puff skin	Project leader	Jan 2016-September 2016	PPRN (RM27,300)	Completed
-	Product Improvement: 1. Crab Noodle Paste 2. Vegetable Noodle	Co-Researcher	Jan 2016-September 2016	PPRN (RM60,000)	Completed
-	Extension shelf life of sagu berkrum, dadih, muruku and jelly kelapa	Co-Researcher	Jan 2016-September 2016	PPRN (RM30,000)	Completed
UPMCS2016	Development of three functional food products from virgin oil	Co-Researcher	2015-2017	Tropica Beauty Sdn. Bhd. (RM90,000)	On going
03-01-04-SF1822	Recovery of lauric free fractions from palm kernel stearin and its application as cocoa butter substitute	Project leader	1 May 2014-2015	Science fund (RM40,000)	Completed
GP/IPS/2013/9399840	Improvement of peeling methods for mango puree production	Project leader	1 January 2014-31 December 2015	Geran UPM 2013 (RM15,000)	Completed
GP/IPS/2013/9399841	Development of salad dressing containing optimum phytosterols from cocoa butter using supercritical fluid extraction (SFE)	Project leader	1 January 2014-31 December 2015	Geran UPM 2013 (RM15,000)	Completed

UPMCS2012-56	Optimization of yeast starter culture for cocoa fermentation	Project leader	1 October 2012- 30 September 2013	Barry Callebaut Services Asia Pacific Sdn Bhd (RM79,200)	Completed
I-eco/68 (UPM-12)	Improvement and shelf life extension of fresh creams chocolate filling for Tolaal Enterprise	Project leader	30 August 2012 – September 2014	Program Pemindahan Ilmu (KTP) (RM113,775)	Completed
TF0310F095	Pilot Manufacturing of “Halal” Prebiotic Chocolate.	Project leader	20 May 2011- September 2014	Technofund (RM 800,000)	Completed
02-05-11-1588RU	Production of low fat cocoa granules for cocoa bean espresso beverage	Project leader	23 December 2011-27 December 2013	RUGS 5 (RM30,000)	Completed
IRPA 03-04-07-10002-EAR	Development of Prebiotic Chocolates	Project leader	2005-2008	IRPA	Completed

### I. Penyeliaan Pelajar Tesis Master sebagai Pengerusi

No	Tahun	Nama	Tajuk Tesis/Projek	Tahap
1	2014	Baizura Aya Putri Bt Agus	Effect of roasting Malaysia cocoa bean on PAHs formation	Master
2	2014	Ida Madiha Yusoff	Antimicrobial activities of cinnamon leaves extract ( <i>Cinnamom zeylanicum</i> Blume) ultrasonic assisted extraction against selected foodborne pathogens	Master
3	2013	Halimatun Sa'adiah Binti Abdul Halim	Effect of pressure and temperature on the fractionation of coconut oil by supercritical fluid extraction and its application as cocoa butter substitute	Master
4	2013	Nur Sadrina Binti Mohamad	Effects of manual, chemical and enzymatic peeling methods towards Malaysia mango ( <i>Mangifera Indica</i> L. cv. Chok Anan) puree properties	<b>Master/ Completed</b>

5	2012	Aisyah Zafirah Binti Md Dali	Effect of fat content and grinding process on development of espresso cocoa drink	Master
6	2012	Raihana Binti Abdul Razak	Effects of hydrocolloids on mango filled chocolate	Master
7	2012	Roiani Binti Mohamad	Effect of different solvent and extraction methods on phytosterols and antioxidant activity of cocoa butter and the application of the cocoa butter in salad dressing	<b>Master/ Completed</b>