

DEVELOPMENT OF A HIGH VITAMIN C PUMPKIN  
AS A SUPERFOOD

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A circular red stamp with the text "PUSAT PENGETAHUAN DIGITAL SULTANAH NUR ZAHIAH \* UMT" around the perimeter and "UMT" in the center.

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## Development of (*Cucurbita maxima*) pumpkin jam as a chocolate filling / Mohd Hafiz Juhari Mohd Sabri.

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PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH

**DEVELOPMENT OF (*CUCURBITA MAXIMA*) PUMPKIN JAM  
AS A CHOCOLATE FILLING**

**MOHD HAFIZ JUHARI BIN MOHD SABRI**

**RESEARCH PROJECT submitted in partial fulfillment of the requirement  
for the degree of Bachelor of Food Science  
(Food Service and Nutrition)**

**FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE**

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### **Declaration**

I hereby declare that this thesis is based on my original work except for the quotations citations, which have been duly acknowledged.

13 Mei 2007



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MOHD HAFIZ JUHARI BIN MOHD SABRI

UK10125

13 Mei 2007

Approved by,



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PUAN FARIDAH BT YAHYA

(Supervisor)

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## ABSTRACT

This study was carried out to develop of (*Cucurbita Maxima*) pumpkin jam as a chocolate filling. It consists of the physical and sensory evaluation. There are four samples of pumpkin jams that were used in this study. SAS program are used for Analysis of Varian (ANOVA) and Duncan Multiple Range Test (DMRT). For physical analysis study shows that 400 g pumpkin with rind is the highest value in pH while 200 g pumpkin without rind was the lowest value and have significant different. For water activity and 'b' value, the highest values are 400 g without rind. The highest value for 'L' and 'a' are 400 g pumpkin with rind. For TSS, texture and viscosity, samples with 200 g pumpkin with rind are the highest value. For 'L', 'a', 'b' and water activity, the lowest values are 200 g pumpkin without rind. For texture analysis, the lowest value is sample 400 g pumpkin with rind and for viscosity is sample 400 g without rind. There had significant different ( $p<0.05$ ) between pumpkin with rind and without rind. There were 50 panelists that involved in affective test for sensory evaluation. Sample chocolate with jam 200 g pumpkin with rind was most acceptable with highest means score of colour, sweetness, suitability among chocolate and filling and overall acceptability. It shows that pumpkin jam had potential to be filling of the chocolate and can accept by the panels.

## PENGHASILAN JEM LABU (*CUCURBITA MAXIMA*) SEBAGAI INTI COKOLAT

### ABSTRAK

Kajian ini dilakukan untuk menghasilkan jem labu (*Cucurbita Maxima*) sebagai inti coklat. Ia merangkumi kajian terhadap ciri-ciri fizikal dan penilaian sensori. Empat formulasi jem labu telah disediakan. Program *SAS* digunakan untuk melakukan analisis varians (*ANOVA*) dan *Duncan's Multiple Range Test (DMRT)*. Data analisis fizikal menunjukkan sampel jem labu berkulit 400 g menunjukkan nilai pH yang tinggi manakala sampel jem labu yang tidak berkulit 200 g paling rendah serta terdapat perbezaan signifikan ( $p<0.05$ ). Bagi keaktifan air, 'L' dan 'a', nilai yang paling tinggi ialah sampel jem labu 400 g tidak berkulit. Sementara itu, sampel jem labu yang berkulit 200 g paling tinggi bagi analisis bentuk, jumlah kandungan gula dan kelikatan. Sampel jem labu yang paling rendah adalah 200 g tanpa kulit iaitu bagi analisis 'L', 'a', 'b' dan keaktifan air. Bagi analisis bentuk dan kelikatan, nilai sampel yang paling rendah adalah 400 g labu dengan kulit dan tanpa kulit. Hasil kajian juga menunjukkan terdapat perbezaan signifikan antara jem labu berkulit dan tidak berkulit ( $p<0.05$ ). Terdapat 50 panel yang terlibat dalam ujian afektif bagi penilaian sensori. Coklat yang berintikan jem labu yang disediakan dengan 200g berkulit diterima oleh panel berdasarkan atribut iaitu warna, kemanisan, kesesuaian antara inti dengan coklat dan juga penerimaan keseluruhan. Ini menunjukkan jem labu berpotensi untuk dijadikan sebagai inti coklat dan dapat diterima oleh panel.