

EFFECTS OF PUMPKIN (*Cucurbita maxima*) PUREE  
INCORPORATION ON THE CHARACTERISTICS  
OF NOODLE

CHEE SWEE BIN

FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU  
MENGABANG TELUK  
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CHEE SWEE RIN

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FACULTY OF AGROTECHNOLOGY & FOOD SCIENCE  
KOLEJ UNIVERSITI SAINS & TEKNOLOGI MALAYSIA  
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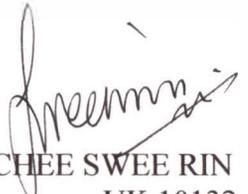
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## DECLARATION

I hereby declare that this research project is based on my original work except for quotations and summaries which have been duly acknowledged.

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CHEE SWEE RIN  
UK 10132

28<sup>th</sup> June 2007

Approved by,

DR AMIZA MAT AMIN  
(Supervisor)

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## ABSTRACT

This study was carried out to determine the effects of pumpkin puree incorporation on the characteristics of noodles. Pumpkin purees (both with pumpkin skin and without pumpkin skin) were incorporated into noodles in the percentages of 10%, 20%, 30% and 40%. All noodle samples were then analyzed for their physical characteristics, proximate composition, sensory acceptance and shelf life. Physical analysis comprised of the colour profile analysis and texture analysis. As for the determination of proximate composition, the composition of ash, crude protein, crude fat, crude fibre, water, energy and carbohydrate were determined by using the AOAC method. Sensory analysis was carried out on attributes such as the colour, smell, shape, firmness, taste, moistness, softness and overall acceptance. Meanwhile, in the microbiological analysis, homogenized samples were cultured in Nutrient Agar and DRBC Agar to determine the total bacterial and yeast and mould count. All noodles had desirable colour, in terms of brightness, redness and yellowness. The tensile strength and elasticity of noodle samples decreased with the addition of pumpkin puree incorporation. As for the proximate composition, pumpkin noodle samples generally gave higher ash content in comparison to the control sample (100% wheat flour). Pumpkin noodle samples also gave higher value of crude fat content and crude fibre content when compared to the control sample. Sensory evaluation result indicated that panels preferred most noodles which were incorporated with 30% of pumpkin puree. In terms of shelf-life, pumpkin noodles could last averagely about 4-5 days in refrigerated condition. Signs of spoilage were indicated by foul odour, fungi growth and also colour changes of noodles.

## ABSTRAK

Kajian ini telah dijalankan untuk menentukan kesan penambahan puri labu terhadap ciri-ciri mee. Puri labu (dengan kulit labu dan tanpa kulit labu) telah ditambahkan ke dalam mee dalam peratus sebanyak 10%, 20%, 30% dan 40%. Semua sampel mee telah dianalisa untuk mengetahui ciri-ciri fizikal, komposisi proksimat, penerimaan sensori dan jangka hayatnya. Analisis fizikal terdiri daripada analisis profil warna dan analisis tekstur. Penentuan komposisi proksimat pula dijalankan dengan menentukan komposisi abu, protein kasar, lemak kasar, fiber kasar, air, tenage dan karbohidrat. Semua kaedah penentuan komposisi proksimat adalah dengan menggunakan kaedah AOAC. Analisis sensori telah dilakukan terhadap atribut seperti warna, bentuk, bau, rasa, kekenyalan, kelembapan, kelembutan dan penerimaan keseluruhan mee. Manakala, dua jenis agar iaitu Agar Nutrien dan Agar DRBC telah digunakan dalam analisis mikrobiologi untuk menentukan jumlah hitungan bakteria serta yis dan kulat. Semua sampel mee mempunyai warna yang diinginkan dari segi keterangan, kemerahan dan kekuningan. Tenaga tensil dan elastisiti mee menurun apabila peratus penambahan puri labu meningkat. Dari segi komposisi proksimat, sampel mee labu secara umumnya mempunyai kandungan abu, lemak kasar dan fiber kasar yang lebih tinggi daripada sampel kawalan (100% tepung gandum). Keputusan ujian sensori menunjukkan bahawa panel paling menyukai mee labu yang mempunyai kandungan puri labu sebanyak 30%. Dari segi jangka hayat, mee labu dapat bertahan selama 4-5 hari dalam keadaan refrigerasi. Tanda-tanda kerosakan yang ditunjukkan oleh mee labu adalah perubahan warna, kehadiran bau busuk dan pertumbuhan kulat.