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Development of Dragon Fruit (*Hylocereus undatus*)
Jam as a Chocolate Filling

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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.

26 June 2007

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ABSTRACT

This study had been carried out to determine best formulation of dragon fruit jam to be a suitable and most acceptable as a chocolate filling. There were 3 samples tested which are jam that produced from raw dragon fruit, jam produced from dragon fruit which was blanched at 80°C for 5 minutes, jam produced from dragon fruit which was steamed at 100°C for 5 minutes. Analysis that tested were total soluble solid (°Brix), pH, water activity, viscosity, texture, moisture content and colour analysis ('L', 'a' and 'b'). Jam with (raw dragon fruit) had significantly different ($p < 0.05$) with other sample jams in ('L', 'a' and 'b') value with the lowest value -1.61 ± 0.05 in yellowness 'b', 31.08 ± 0.14 in lightness 'L', and higher in redness 'a' 1.21 ± 0.04 . The attributes for sensory evaluation are colour, smell, viscosity, sweetness, sourness, balance of taste (sweetness and sourness), suitability among chocolate and filling and overall acceptance. The jam produced from dragon fruit which was blanched at 80°C for 5 minutes is most acceptable by the panel due to the highest mean score the overall attributes.

PENGHASILAN COKELAT BERINTI JEM BUAH NAGA

ABSTRAK

Kajian ini dilakukan untuk mengenalpasti perumusan yang terbaik jem buah naga yang mana sesuai dan paling diterima sebagai inti coklat. Terdapat 3 sampel yang dikaji dalam kajian ini iaitu jem dibuat dari buah naga mentah, jem dibuat daripada buah naga selepas dicelur dengan 80°C air panas selama 5 minit dan jem dibuat daripada buah naga selepas dikukus dalam 100°C air panas selama 5 minit. Analisis fizikal yang dijalankan melibatkan penentuan jumlah pepejal larut yang dijalankan adalah penentuan kandungan pepejal larut (°Brix)°C, pH, aktiviti air, kelikatan, tekstur, kandungan kelembapan dan warna ('L', 'a', 'b'). Jem dibuat dari buah naga mentah mempunyai nilai kekuningan 'b' yang paling rendah iaitu -1.61 ± 0.05 , nilai kecerahan 'L' adalah 31.08 ± 0.14 , dan paling tinggi dalam nilai kemerahan 'a' dengan nilai 1.21 ± 0.04 , 100% dan mempunyai perbezaan yang signifikan ($p < 0.05$) dengan sampel B sampel C. Atribut untuk penilaian sensori adalah terdiri daripada warna, bau, kelikatan, kemanisan, kemasaman, keseimbangan rasa (manis dan masam), kesesuaian menjadi inti coklat dan penerimaan keseluruhan. Untuk sensori, jem dibuat daripada buah naga selepas dicelur dengan 80°C air panas selama 5 minit yang boleh diambil untuk yang paling boleh diterima sebagai inti coklat.