

THE EFFECT OF TEMPERATURE ON THE CHARACTERISTICS OF GIVE

RESEARCH REPORT

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The effects of pumpkin flour incorporation on the characteristics of cake / Nazihah Awang.

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THE EFFECTS OF PUMPKIN FLOUR INCORPORATION
ON THE CHARACTERISTICS OF CAKE

By

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RESEARCH PROJECT submitted in partial fulfillment of the requirements for the
Degree of Bachelor of Food Science
(Food Service and Nutrition)

FACULTY AGROTECHNOLOGY AND FOOD SCIENCE
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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. I also declare that it has not been previously or concurrently submitted for any degrees at UMT or other institutions.

10th June 2007


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Approved by,

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ABSTRACT

The objective of this study was to determine the effects of pumpkin flour incorporation on the physicochemical characteristics of cake and to evaluate the acceptance of cakes incorporated with pumpkin flour. Thirteen formulations of cake were prepared which were control sample (0% pumpkin flour) and cakes incorporated with 10%, 20%, 30% and 40% of three different types of pumpkin flour, which were pumpkin flour with rind (WR), pumpkin flour without rind (WO) and whole pumpkin flour (WH), respectively. The study found that crude fat, crude fiber and moisture contents of cakes increased significantly, while the protein content decreased significantly with the incorporation of higher percentage of pumpkin flour. The results also revealed that incorporation of pumpkin flour increased the firmness of the cakes and decreased the volume of the cakes. The lightness and yellowness of cakes differed significantly at higher incorporation of pumpkin flours. The data from physical and chemical analysis also revealed that the incorporation of different types of pumpkin flour affects the characteristics of cakes. The cake prepared with 40% of whole pumpkin flour (WH) gave the highest fat and fiber contents which were 24.8% and 2.16%. The incorporation of whole pumpkin flour (WH) also contributed to the darkest color of cakes compared to the other types of pumpkin flours. Cakes incorporated with 10-20% pumpkin flour were more acceptable by the panelists. The cake incorporated with 10% of pumpkin flour without rind (WO) was the most preferable sample.

KESAN PENAMBAHAN TEPUNG LABU KE ATAS CIRI-CIRI KEK

ABSTRAK

Objektif kajian ini ialah untuk menilai kesan penambahan tepung labu ke atas ciri-ciri fizikokimia kek dan untuk menilai tahap penerimaan sensori kek yang disediakan daripada tepung labu. Tiga belas formulasi kek disediakan iaitu sampel kek kawalan (0% tepung labu), dan kek yang disediakan dengan peratus masing-masing 10%, 20%, 30% dan 40% daripada tiga jenis tepung labu yang berlainan. Jenis tepung labu tersebut ialah tepung labu dengan kulit (WR), tepung labu tanpa kulit (WO), dan tepung labu dengan kulit dan biji (WH). Hasil kajian mendapati kandungan lemak kasar, serat kasar, dan kandungan kelembapan kek meningkat secara signifikan, manakala kandungan protein kasar menurun dengan peningkatan penambahan tepung labu. Hasil kajian juga menunjukkan penambahan tepung labu meningkatkan ketegaran kek dan menurunkan isipadu kek. Kecerahan dan kekuningan kek berbeza secara signifikan dengan penambahan tepung labu. Data daripada analisis fizikal dan kimia menunjukkan penambahan tepung labu daripada jenis yang berlainan memberi kesan ke atas ciri-ciri kek. Kek yang dihasilkan daripada 40% tepung labu dengan kulit dan biji mempunyai kandungan lemak kasar dan serat kasar tertinggi dengan jumlah 24.8% dan 2.16%. Penambahan tepung dengan biji dan kulit menyumbang kepada warna kek yang paling gelap berbanding kek yang dihasilkan daripada tepung labu dengan kulit dan tepung labu tanpa kulit. Kek yang dihasilkan daripada 10% hingga 20% tepung labu yang lebih diterima oleh panel. Kek yang disediakan daripada 10% tepung labu paling diterima oleh panel.