

THE EFFECTS OF SUBSTITUTION ON THE
QUALITY OF BREADS MADE FROM
WHEAT FLOUR

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**EFFECTS OF PUMPKIN ADDITION ON THE CHARACTERISTICS OF
PINEAPPLE LEATHER**

By

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DECLARATION

I hereby declare that this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any degree at UMT or other institutions.

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ABSTRACT

The effects of pumpkin addition incorporating up to 800 g pumpkin puree on the characteristics of pineapple leather were investigated. Both control and pumpkin puree with and without skin incorporated pineapple leather quality were evaluated in terms of textural characteristics, drying curve, color profile, moisture content and fiber content. The color, aroma, chewiness, sweetness, sourness, balance of sweetness and sourness and overall acceptability for both control and addition of pumpkin puree incorporation of pineapple leather were sensorically evaluated using effective test. Incorporation of pumpkin puree up to 800 g resulted in increasing in moisture content and fiber content of the pineapple leathers. However, pumpkin puree incorporating of more than 600 g for addition of pumpkin without skin did not have a significant increase in fiber content and moisture content for both addition of pumpkin with and without skin. From the findings, there was significant decrease in the textural characteristics where pineapple leather with 200 g to 800 g addition of pumpkin with skin showed more than 50 % tougher and stickier than control formulation. All the drying curve analysis results were significantly different at $p < 0.05$ where the plotted graph for the moisture loss dropped drastically for the first hour and almost linear after 3 hours of drying for all the formulation of pineapple leather. Pumpkin puree incorporated with pineapple leather shows significant difference on L (lightness), a (redness) and b (yellowness) value. Pineapple leather incorporation with 200 g of pumpkin puree was the most preferable among the formulation in sensory evaluation. Pineapple leather for control formulation was more preferable than pineapple leather incorporating with pumpkin puree.

KESAN PENAMBAHAN PURI LABU KE ATAS CIRI-CIRI GEGULUNG NENAS

ABSTRAK

Kajian ini mengkaji kesan penambahan sebanyak 800 g puri labu terhadap ciri-ciri gegulung nenas. Kedua-dua kualiti sampel kawalan dan kualiti sampel puri labu beserta kulit dan labu tanpa kulit dinilai dari segi ciri-ciri tekstur, lekuk pengeringan, profil warna, kandungan kelembapan dan kandungan gentian kasar. Warna, aroma, kekenyalan, kemanisan, kemasaman, keseimbangan rasa manis dan masam serta penerimaan keseluruhan terhadap kedua-dua sampel kawalan dan sampel yang ditambah dengan puri labu ke dalam gegulung nenas dinilai secara sensori dengan menggunakan ujian afektif. Gabungan sebanyak 800 g puri labu menunjukkan keputusan peningkatan dalam kandungan kelembapan dan kandungan gentian kasar gegulung nenas. Walaubagaimanapun, campuran lebih daripada 600 g puri labu tanpa kulit tidak menunjukkan peningkatan yang signifikan terhadap kandungan gentian kasar dan kandungan kelembapan bagi kedua-dua penambahan labu beserta kulit dan labu tanpa kulit. Daripada hasil kajian, terdapat penurunan yang signifikan terhadap ciri-ciri tekstur di mana gegulung nenas dengan penambahan 200g ke 800 g labu beserta kulit menunjukkan lebih daripada 50 % kenyal dan melekit berbanding formulasi kawalan. Kesemua keputusan analisis lekuk pengeringan menunjukkan perbezaan yang signifikan pada $p < 0.05$ di mana graf yang diplot bagi kehilangan lembapan menurun secara drastic pada jam pertama dan hampir linear selepas 3 jam pengeringan bagi kesemua formulasi gegulung nenas. Gabungan puri labu dengan gegulung nenas menunjukkan terdapat perbezaan yang signifikan terhadap nilai-L (kecerahan), nilai-a (kemerahan) dan nilai-b (kekuningan). Gegulung nenas 200 g puri labu adalah paling diterima berbanding kesemua formulasi dalam penilaian sensori. Akan tetapi, gegulung nenas bagi formulasi kawalan adalah lebih diterima berbanding gegulung nenas campuran puri labu.