

DEVELOPMENT AND ENVIRONMENTAL ANALYSIS OF

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**DEVELOPMENT AND PHYSICOCHEMICAL ANALYSIS OF NATA DE
CARROT**

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

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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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Approved by,

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(Supervisor)

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ABSTRACT

This study was conducted to physicochemical analysis and development of nata de carrot. Objectives of the study are to study the development of nata de carrot, to determine the physicochemical analysis of nata de carrot by modified nata de coco formulation and to develop a new flavor nata which will substitute coconut to carrot. There were five formulations and included the control sample was carry out for this study which the different among the formulations are different amount of carrot juices content. The parameter of physical properties was strengthness which using 5mm Spherical Probe (P/5S) using 5kg load cell. The chemical analyses for the nata were moisture content, ash content, carbohydrates and fiber. Nata with 400ml (formulation D) of carrot juices scores the highest for the strengthness, 69.94gcm while the control sample scores the lowest in the strengthness, 20.65gcm. For the moisture content analysis, formulation using 700ml carrot juices (formulation A) showed the highest in the moisture content, 13.52%, carbohydrates content, 34.03% and fiber content, 6.16%. There were some significant ($p>0.05$) different in moisture content and fiber especially carbohydrates showed all significant different. Surface color for all four formulations showed no significantly different. Formulation A contributes more color among the formulations. Therefore, formulation A more prefer and more suitable be used to make nata.

PENGHASILAN DAN ANALISIS FIZIKIMIA NATA DE KAROT

ABSTRAK

Kajian ini dilakukan untuk penghasilan dan menjalankan analisis fizikimia ke atas nata de karot. Objektif kajian ini adalah untuk mengkaji penghasilan nata de lobak merah, penghasilan nata dengan menggunakan formulasi yang berbeza, analisis kimia fizik untuk nata de karot dengan mengubahsuai nata de coco formulasi dan pembangunan rasa yang baru di mana penggantian daripada kelapa kepada lobak merah. Lima formulasi dihasilkan dengan kandungan jus lobak merah yang berbeza dan termasuk sampel kawalan. Parameter yang dikaji ke atas sifat fizikal adalah kekuatan di mana menggunakan "5mm Spherical Probe (P/5S) using 5kg load cell". Analisis kimia yang dikaji pula adalah termasuk kandungan lembapan, kandungan abu, karbohidrat dan gentian serat. Nata di mana dihasilkan dengan menggunakan 400ml jus lobak merah menunjukkan kekuatan min skor yang tertinggi bagi keputusan kekuatan adalah 69.94gcm. Manakala, nata yang dihasilkan dengan menggunakan sampel kawalan menunjukkan min skor yang rendah bagi keputusan kekuatan adalah 20.65gm. Untuk analisis kandungan lembapan, nata yang dihasilkan dengan menggunakan 700ml jus lobak merah (formulasi A) menunjukkan kandungan lembapan yang tinggi, 13.52%, kandungan karbohidrat yang tinggi 34.03% dan juga kandungan gentian serat yang tinggi 6.16%. Terdapat perbezaan yang signifikan di sesetengah formulasi dari segi analisis kandungan lembapan, fiber terutama analisis gentian serat di mana semua formulasi menunjukkan perbezaan yang signifikan. Warna permukaan bagi semua formulasi tidak menunjukkan banyak perbezaan. Di antara formulasi, formulasi A menunjukkan sedikit perubahan warna. Oleh itu, formulasi A adalah formulasi yang paling sesuai untuk menghasilkan nata de lobak merah.