EFFECT OF DIFFERENT PICKLING METHOD ON
PHYSICOCHEMICAL CHARACTERISTICS AND SENSORY
ACCEPTANCE OF ROSELLE (*Hibiscus sabdariffa* L.) FRUIT

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Lihat Sebelah

EFFECT OF DIFFERENT PICKLING METHODS ON PHYSICOCHEMICAL CHARACTERISTICS AND SENSORY ACCEPTANCE OF ROSELLE (*Hibiscus sabdariffa L.*) PICKLE

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Research Report submitted in partial fulfillment of the requirement for the degree of Bachelor of Food Science (Food Service and Nutrition)

**DEPARTMENT OF FOOD SCIENCE
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ENDORSEMENT

The project report entitled **Effect of different pickling methods on physicochemical characteristics and sensory acceptance of roselle (*hibiscus sabdariffa l.*) pickle** by **Siti Nazirul Ihsan Binti Ishak,** Matric No. **UK17737** has been reviewed and corrections have been made according to the recommendations by examiners. This report is submitted to the Departmant of Food Science in partial fulfillment of the requirement of the degree of **Bachelor of Food Science (Food Service and Nutrition),** Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu.

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DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

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ABSTRACT

This study was conducted to determine the effect of different pickling methods on physicochemical characteristics and sensory acceptance of roselle (*hibiscus sabdariffa l.*) pickle. The pickles were produced using two different methods with different percentages of salt. These two methods were split pickling method and combined pickling method. The percentages of salt used for split pickling method and combine pickling method were 15%, 10%+5% and 10% and 5%, 10% and 15% respectively. The physical characteristic, chemical characteristics and sensory acceptance test were determined. The treatment of roselle with combined pickling method had proved color and anthocyanin content of roselle pickle compare to products of split pickling method. However, texture of product was better on split pickling method's product compare the other one type of product due to total soluble solid content of pickling solution was lower and effect the osmotic pressure of solution. Evaluation of vitamin C content on both treatments of products was constant in all samples. All sensory attribute (color, taste, aroma, texture and overall acceptance) showed a significant different ($p < 0.05$) among formulations except for aroma and color. The most acceptable formulation was roselle pickle of combined pickling method with 5% of salt content. The combination results of texture, color, taste, vitamin C and anthocyanin content show that this method was suitable for roselle and make it valuable as other pickle products.

ABSTRAK

Kajian ini dilakukan bagi mengetahui kesan kaedah penjerukan yang berlainan kepada ciri-ciri fizikal, kimia dan penilaian deria rasa terhadap jeruk roselle *(hibiscus sabdariffa l.)*. Jeruk roselle dihasilkan dengan menggunakan dua kaedah penjerukan yang berbeza dengan peratusan garam yang berbeza. Dua kaedah penjerukan itu ialah kaedah penjerukan berasingan dan kaedah penjerukan campuran. Peratusan garam yang digunakan dalam kaedah penjerukan berasingan dan kaedah penjerukan campuran adalah masing-masing 15%, 10%+5% dan 15% dan 5%, 10% dan 15%. Dalam kajian ini, ciri-ciri fizikal, ciri-ciri kimia dan penilaian deria telah dikenalpasti. Jeruk roselle dengan kaedah penjerukan campuran telah membuktikan warna dan kandungan *anthocyanin* berbandingan kaedah penjerukan berasingan. Jumlah kandungan bahan keterlarutan yang boleh menyebabkan tekanan osmosis di dalam larutan jeruk bagi kaedah penjerukan berasingan adalah rendah dan menghasilkan tekstur produk yang lebih baik daripada produk yang dihasilkan melalui kaedah penjeruk campuran. Hasil penilaian terhadap kandungan vitamin C adalah sama bagi semua sampel. Kesemua sifat yang dikaji dalam penilaian deria rasa (warna, rasa, aroma, tekstur dan penerimaan keseluruhan) menunjukkan perbezaan signifikasi ($p < 0.05$) diantara kesemua formulasi kecuali aroma dan warna. Formulasi yang boleh diterima adalah formulasi kaedah penjerukan campuran dengan 5% kandungan garam. Hasil gabungan keputusan daripada tekstur, warna, rasa, kandungan vitamin C dan *anthocyanin,* ia menunjukkan bahawa kaedah penjerukan campuran adalah sesuai bagi roselle dan berpotensi menjadikan ia sebagai satu produk penjerukan yang bernilai.