

DEVELOPMENT AND PHYSICOCHEMICAL PROPERTIES
OF COOKIES INCORPORATED WITH DATE SEED
POWDER

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By
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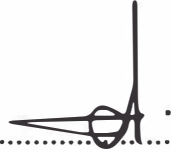
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ENDORSEMENT

The project report entitled **Development and Physicochemical Properties of Cookies Incorporated with Date Seed Powder** by **Ho Jia Wei, UK 16467** has been reviewed and corrections have been made according to the recommendations by examiners. This report is submitted to the Department of Food Science in partial fulfillment of the degree of Food Science (Food Technology), 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

The approach of this study is to develop high fiber cookies with a new source of fiber. In this research, date seed powder (DSP) which contains high fiber content was incorporated into cookies with different percentages which were 0% (control), 10%, 20%, 30% and 40%. Samples from each formulation were analyzed for physical properties (color, texture and spread ratio), chemical properties (moisture, protein, crude fat, ash, crude fiber and carbohydrate) and also sensory evaluation (color, aroma, taste, texture and overall acceptance). Overall, the results showed that the presence of DSP influenced the characteristics of cookies. From the results obtained, the physical properties showed that the value of texture (hardness) and spread ratio of cookies were inversely proportional to the percentage of DSP incorporated in cookies. The chemical properties of cookies showed that the percentage of moisture, ash and crude fiber were directly proportional to the percentage of DSP incorporated while the other properties (protein, crude fat and carbohydrate) were inversely proportional to the percentage of DSP incorporated. However, the chemical analysis showed no significant difference among the samples except for crude fiber content. For sensory evaluation, the results showed that the 10% DSP incorporated cookie was the most accepted overall.

ABSTRAK

Kajian ini adalah untuk menghasilkan biskut berserat yang tinggi dengan sumber serat yang baru. Dalam kajian ini, serbuk biji kurma (DSP) yang mengandungi kandungan serat yang tinggi telah ditambahkan ke dalam biskut dengan peratusan yang berbeza iaitu 0% (kawalan), 10%, 20%, 30% dan 40%. Sampel dari setiap penggubalan dianalisis untuk sifat-sifat fizikal (warna, tekstur dan nisbah penyebaran), sifat-sifat kimia (kandungan lembapan, protein, lemak kasar, abu, serat kasar dan karbohidrat) dan juga penilaian deria (warna, aroma, rasa, tekstur dan penerimaan keseluruhan). Secara keseluruhan, keputusan menunjukkan bahawa kehadiran DSP mempengaruhi ciri-ciri biskut. Daripada keputusan yang diperolehi, sifat-sifat fizikal menunjukkan bahawa nilai tekstur (kekerasan) dan nisbah penyebaran biskut berkadar songsang dengan peratusan DSP dalam biskut. Komposisi kimia biskut menunjukkan bahawa peratusan kandungan lembapan, abu dan serat kasar berkadar terus dengan peratusan DSP dalam biskut manakala komposisi kimia yang lain (protein, lemak mentah dan karbohidrat) berkadar songsang dengan peratusan DSP dalam biskut. Walau bagaimanapun, analisis kimia menunjukkan tiada perbezaan yang signifikan di kalangan sampel kecuali kandungan serat kasar. Untuk penilaian deria, keputusan menunjukkan bahawa biskut dengan penambahan DSP sebanyak 10% adalah yang paling diterima secara keseluruhan.