

PENGARUH TEPUNG BERAS, MENIR DAN BEKATUL DARI PENGGILINGAN GABAH PRATANAK, DAN JENIS PEMANIS RENDAH KALORI TERHADAP SIFAT FISIK DAN KIMIA BISKUIT

INTISARI

Biskuit sebagai makanan selingan yang cocok bagi diabetes perlu disediakan. Pembuatan biskuit dapat dilakukan dengan substitusi terigu menggunakan tepung dari fraksi hasil penggilingan gabah pratanak (beras, menir dan bekatul) serta pemanis rendah kalori. Tujuan penelitian ini ialah mempelajari sifat kimia dan fisik biskuit yang disubstitusi dengan tepung beras pratanak, tepung menir, dan bubuk bekatul, serta jenis bahan pemanis rendah kalori.

Penelitian ini dikerjakan menggunakan rancangan acak lengkap dengan dua faktor, yaitu variasi jenis tepung penggilingan gabah pratanak (beras, menir dan bekatul) dan variasi campuran bahan pemanis rendah kalori. Tepung beras yang digunakan sebanyak 40%, tepung menir 30%, dan tepung bekatul 20%. Jenis bahan pemanis yang digunakan ialah isomalt, asesulfam, sorbitol, stevia, dan gula halus, sedangkan masing-masing campurannya yaitu pemanis 1 : isomalt, sorbitol, asesulfam; pemanis 2 : isomalt, asesulfam; pemanis 3 : sorbitol, asesulfam; pemanis 4 : gula halus, sorbitol; pemanis 5 : stevia. Analisis yang dilakukan meliputi, kadar air, kadar pati, protein, gula total, tekstur dan warna terhadap biskuit. Data yang diperoleh dianalisis secara statistik menggunakan *Univariate Analysis of Variance* dari *software SPSS* dengan tingkat kepercayaan 95%.

Hasil penelitian menunjukkan bahwa jenis tepung pensubstitusi dan jenis pemanis mempengaruhi secara nyata terhadap kadar air, pati, tekstur dan warna biskuit. Biskuit terbaik dihasilkan dari jenis tepung beras 40% dan jenis bahan pemanis campuran dari gula pasir dengan sorbitol yang memiliki kadar air 5,69%, pati 41,22%, protein 6,65%, gula total 20,57%, tekstur 1249 (g) dan *lightness* 72,71.

Kata kunci: Biskuit, Beras Pratanak (*Parboiled*), Menir, Bekatul, Pemanis Rendah Kalori.

**THE EFFECT OF RICE FLOUR, BROKEN RICE FLOUR, AND RICE
BRAN FROM HULLING OF PARBOILED PADDY, AND TYPE OF
LOW CALORIE SWEETENERS ON THE PHYSICAL AND
CHEMICAL PROPERTIES OF BISCUIT**

ABSTRACT

Biscuits as a suitable snack for diabetes need to be provided. Making biscuits can be done by substituting flour using flour from the fraction of parboiled rice grains (rice, groats and rice bran) as well as low-calorie sweeteners. The purpose of this study is to examine the chemical properties and physical biscuits substituted with parboiled rice flour, flour groats, and bran powder, as well as the type of low calorie sweetener.

This research was carried out using a completely randomized design with two factors, namely variations in the type of rice flour grinding rice (rice, groats and bran) and variations in a mixture of low-calorie sweeteners. Rice flour was used as much as 40%, 30% groats flour, and 20% rice bran flour. The types of sweeteners used are isomalt, acesulfame, sorbitol, stevia, and refined sugar, while each mixture is sweetener 1: isomalt, sorbitol, acesulfame; sweeteners 2: isomalt, acesulfame; sweeteners 3: sorbitol, acesulfame; sweetener 4: refined sugar, sorbitol; sweetener 5: stevia. The analysis included water content, starch content, protein, total sugar, texture and color of the biscuits. The data obtained were analyzed statistically using Univariate Analysis of Variance from SPSS software with a confidence level of 95%.

The results showed that the type of substitutional flour and the type of sweetener significantly affected the water content, starch, texture and color of the biscuits. The best biscuits are made from 40% rice flour and sweetener mix from granulated sugar with sorbitol which has a water content of 5.69%, starch 41.22%, protein 6.65%, total sugar 20.57%, texture 1249 (g) and lightness 72.71.

Keywords: Biscuits, Parboiled Rice, Broken Rice, Rice bran, Low-Calorie Sweeteners.