

# RASIO TEPUNG UBI JALAR KUNING DAN TEPUNG SORGHUM PADA PEMBUATAN KUE LUMPUR SEBAGAI PANGAN KAYA PROTEIN DAN ANTIOKSIDAN

[RATIO OF YELLOW SWEET POTATO FLOUR AND SORGHUM FLOUR IN MUD CAKE MAKING AS A FOOD RICH IN PROTEIN AND ANTIOXIDANTS]

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## ABSTRACT

*Mud cake is one type of Indonesian wet cake. This cake is round and flat, yellowish in color, has a sweet and savory taste and has a soft texture. This study aimed to determine the best ratio of yellow sweet potato flour (*Ipomea batatas* L.) and sorghum flour (*Sorghum bicolor* L. Moench) to protein content and antioxidant activity of mud cake. This research used a completely randomized design with a single factor experiment, namely yellow sweet potato flour and sorghum flour (P) consisted of 6 treatments (P1 (0% : 100%), P2 (20% : 80%), P3 (40% : 60%), P4 (60% : 40%), P5 (80% : 20%) and P6 (100% : 0%)) which repeated 3 times to obtain 18 experimental units. The parameters tested were water content, ash content, protein content, crude fiber content, beta-carotene content, antioxidant activity, color (physical test) and organoleptic tests including color, aroma, texture and taste. The observed data were analyzed for variance with a 5% significance level using the Co-Stat software. If there is a significant difference, a further test is carried out with the Honest Significant Difference (BNJ) test. Result of this research showed that the ratio of yellow sweet potato flour and sorghum flour had a significantly different effect on water content, ash content, protein content, crude fiber content, beta-carotene content, antioxidant activity, physical quality (color), and organoleptic test were are color (hedonic and scoring), aroma (hedonic), texture (hedonic and scoring) and taste (hedonic and scoring) of mud cake. The ratio treatment of yellow sweet potato flour and sorghum flour P4 (60% : 40%) was the best treatment according to the research hypothesis resulting in a moisture content 39.34%; ash content 1.23%; protein content 6.81%; antioxidant activity 76.14% and all of organoleptic parameters including color, aroma, texture and taste were acceptable to the panelists based on the hedonic test with a moderate level of preference.*

**Keywords :** antioxidant activity, mud cake, protein, sorghum flour, yellow sweet potato flour

## ABSTRAK

Kue lumpur merupakan salah satu jenis kue basah khas Indonesia. Kue ini berbentuk bulat pipih, berwarna kekuningan, memiliki rasa manis dan gurih serta bertekstur lembut. Penelitian ini bertujuan untuk menentukan rasio tepung ubi jalar kuning (*Ipomea batatas* L.) dan tepung sorgum (*Sorghum bicolor* L. Moench) yang terbaik terhadap kadar protein dan aktivitas antioksidan pada kue lumpur. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan percobaan faktor tunggal yaitu tepung ubi jalar kuning dan tepung sorgum (P) yang terdiri dari 6 perlakuan (P1 (0% : 100%), P2 (20% : 80%), P3 (40% : 60%), P4 (60% : 40%), P5 (80% : 20%) dan P6 (100% : 0%)) dengan 3 kali ulangan sehingga diperoleh 18 unit percobaan. Adapun parameter yang diuji adalah kadar air, kadar abu, kadar protein, kadar serat kasar, kadar betakaroten, aktivitas antioksidan, warna (uji fisik) dan uji organoleptik meliputi warna, aroma, tekstur dan rasa. Data hasil pengamatan dianalisis keragaman dengan taraf nyata 5 % dengan menggunakan *software* Co-Stat. Apabila terdapat beda nyata, dilakukan uji lanjut dengan uji Beda Nyata Jujur (BNJ). Hasil penelitian menunjukkan perlakuan rasio tepung ubi jalar kuning dan tepung sorgum memberikan pengaruh yang berbeda nyata terhadap kadar air, kadar abu, kadar protein, kadar serat kasar, kadar betakaroten, aktivitas antioksidan, mutu fisik (warna), organoleptik warna (hedonik dan skoring), aroma (hedonik), tekstur (hedonik dan skoring) dan rasa (hedonik dan skoring) kue lumpur. Perlakuan rasio tepung ubi jalar kuning dan tepung sorgum P4 (60% : 40%) merupakan perlakuan terbaik sesuai dengan hipotesis penelitian menghasilkan kadar air sebesar 39,34%, kadar abu sebesar 1,23%, kadar protein sebesar 6,81% dan aktivitas antioksidan sebesar 76,14% serta seluruh parameter organoleptik meliputi warna, aroma, tekstur dan rasa dapat diterima oleh panelis berdasarkan uji hedonik dengan tingkat kesukaan agak suka.

**Kata kunci :** aktivitas antioksidan, kue lumpur, tepung sorgum, tepung ubi jalar kuning