

## ABSTRACT

**Mutia Rahma. B.1711041.** Physicochemical and Amylography Properties of Black Rice Flour (*Oryza sativa* L.) with Various Varieties. Supervised by Rosy Hutami and Aminullah.

Black rice is one of the varieties of rice that contains pigment. In Indonesia there are several varieties of black rice. Black rice can be processed into flour because it is durable if stored, easy to mix, fortified, easy to shape, and cooks faster. This study aims to provide information on the potential utilization of black rice flour by knowing the amylographic and physicochemical profiles of various varieties of black rice flour. This study used a Completely Randomized Design (CRD) with one factor, namely the black rice variety used. The factor consisted of four levels with two replications for each treatment, Cempo Ireng variety, Gadog variety, Cianjur variety, and Melik variety. Data analysis used was ANOVA with Duncan's Advanced Test with 95% confidence interval. The results showed that the amylographic profile analysis of gadong black rice flour had the highest peak viscosity and breakdown. Melik variety black rice flour has the highest trough viscosity, final viscosity, setback, peaktime and pasting temperature. Based on physicochemical characteristics, differences in the use of varieties in black rice flour have an effect on yield, moisture content, ash content, fiber content, anthocyanin content, starch content, amylose and amylopectin. The tested black rice flour has the characteristics of water content yield 7.11% – 9.15%, ash content 1.66% – 2.2%, fiber content 2.9% – 5.6%, anthocyanin content 144.40ppm – 990.17ppm, starch content 66.13% – 85.81%, amylose 4.69% – 6.8%, and amylopectin 61.02% – 79.50%.

**Key words :** Black rice flour, variety, amylography

## ABSTRAK

**Mutia Rahma. B.1711041.** Karakteristik Fisikokimia dan Profil Amilografi Tepung Beras Hitam (*Oryza sativa* L.) Berbagai Varietas. Di bawah bimbingan Rosy Hutami dan Aminullah.

Beras hitam merupakan salah satu varietas beras yang mengandung pigmen. Di Indonesia terdapat beberapa varietas beras hitam. Beras hitam dapat diolah menjadi tepung karena tahan lama jika disimpan, mudah dicampur, difortifikasi, mudah dibentuk, dan lebih cepat dimasak. Penelitian ini bertujuan untuk memberikan informasi mengenai pemanfaatan potensi tepung beras hitam dengan mengetahui profil amilografi dan fisikokimia tepung beras hitam berbagai varietas. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) satu faktor yaitu varietas beras hitam yang digunakan. Faktor terdiri dari empat taraf dengan dua kali ulangan untuk setiap perlakuan yaitu varietas Cempo Ireng, varietas Gadog, varietas Cianjur, dan varietas Melik. Analisis data yang digunakan adalah ANOVA dengan Uji Lanjut Duncan dengan selang kepercayaan 95%. Hasil penelitian menunjukkan bahwa analisis profil amilografi tepung beras hitam varietas gadog memiliki *peak viscosity* dan *breakdown* tertinggi. Tepung beras hitam varietas Melik memiliki *trough viscosity*, *final viscosity*, *setback*, *peak time* dan *pasting temperature* tertinggi. Berdasarkan karakteristik fisikokimia, perbedaan penggunaan varietas pada tepung beras hitam memberikan pengaruh terhadap rendemen, kadar air, kadar abu, kadar serat, kadar antosianin, kadar pati, amilosa dan amilopektin. Tepung beras hitam yang diuji memiliki karakteristik rendemen kadar air 7,11% – 9,15%, kadar abu 1,66% – 2,2%, kadar serat 2,9% – 5,6%, kadar antosianin 144,40ppm – 990,17ppm, kadar pati 66,13% – 85,81%, amilosa 4,69% – 6,8%, dan amilopektin 61,02% – 79,50%.

**Kata kunci :** Tepung beras hitam, varietas, amilografi