

ABSTRAK

Penelitian ini bertujuan untuk mempelajari dan menganalisis pengaruh perbandingan tepung jagung putih dan tepung beras dengan perbandingan masing-masing (1:2), (1:1), dan (2:1), serta suhu pra-gelatinisasi 75 °C, 80 °C, dan 85 °C pada karakteristik bubur instan.

Penelitian dilakukan dalam dua tahap meliputi penelitian pendahuluan dan penelitian utama. Penelitian pendahuluan dilakukan dengan penentuan lama dan suhu pengeringan bubur instan terbaik dengan analisis kadar air dan organoleptik. Penelitian utama dilakukan dengan menganalisis ada atau tidaknya pengaruh jenis faktor menggunakan rancangan percobaan pola faktorial 3x3 dengan Rancangan Acak Kelompok (RAK) yang terdiri dari dua faktor yaitu faktor perbandingan tepung jagung putih dan tepung beras masing-masing (1:2), (1:1), dan (2:1), serta faktor suhu pra-gelatinisasi 75 °C, 80 °C, dan 85 °C. Respon yang dianalisa adalah kadar amilosa, Kapasitas Penyerapan Air (KPA), *Swelling Power*, dan organoleptik.

Hasil dari penelitian pendahuluan meliputi analisis kimia kadar air dan organoleptik pada bubur instan jagung putih menggunakan variasi lama dan suhu pengeringan yang berbeda didapat hasil terpilih yaitu lama waktu pengeringan 5 jam dengan suhu 70 °C. Hasil dari penelitian utama menunjukkan bahwa faktor perbandingan tepung jagung putih dan tepung beras memberikan pengaruh signifikan ($p \leq 0.05$) terhadap respon warna pra-seduh, aroma pra-seduh, tekstur pra-seduh, rasa pra-seduh, tekstur seduh namun tidak berpengaruh terhadap kadar amilosa, kapasitas penyerapan air, *swelling power*, warna seduh, aroma seduh, dan rasa seduh. Faktor suhu pra-gelatinisasi memberikan pengaruh signifikan ($p \leq 0.05$) terhadap respon kapasitas penyerapan air, *swelling power*, warna pra-seduh, aroma pra-seduh, tekstur pra-seduh, warna seduh, aroma seduh, tekstur seduh dan rasa seduh namun tidak berpengaruh terhadap kadar amilosa dan rasa pra-seduh. Faktor interaksi perbandingan tepung jagung putih dan tepung beras dengan suhu pra-gelatinisasi memberikan pengaruh signifikan ($p \leq 0.05$) terhadap respon warna pra-seduh, aroma pra-seduh, tekstur pra-seduh, warna seduh, aroma seduh, dan tekstur seduh namun tidak berpengaruh terhadap kadar amilosa, kapasitas penyerapan air, *swelling power*, rasa pra-seduh, dan rasa seduh.

Kata Kunci : Pra-gelatinisasi, Jagung Putih, Bubur Instan

ABSTRACT

This research was carried out to study and analyze the effects of proportion between white corn flour and rice flour respectively (1:2), (1:1), and (2:1) as well as pre-gelatinization temperatures comprised 75 °C, 80 °C, and 85 °C towards instant porridge characteristics.

The research conducted consist of two stages namely preliminary research and primary research. The preliminary research was conducted to determine the optimum drying period and temperature of instant porridge based on its moisture content and organoleptic test. The primary research was done by analyzing whether there are effects between factors. the experimental method used was Randomized Block Design with 3x3 factorial pattern which consists of two factors, namely the proportion factor between white corn flour and rice flour respectively (1:2), (1:1), and (2:1) as well as pre-gelatinization temperatures factor comprised 75 °C, 80 °C, and 85 °C. The analyzed responses consist of amylose content, water absorption index, swelling power, and organoleptic test.

The results of preliminary research consist of moisture content and organoleptic test on instant porridge used several variation of drying period and temperature obtained 5 hours of drying period and 70 °C drying temperature as the selected treatment. The results of primary research showed that the proportion factor between white corn flour and rice flour significantly ($p \leq 0.05$) affected pre-brewed color, pre-brewed aroma, pre-brewed texture, pre-brewed flavor, brewed texture but not significantly affected amylose content, water absorption index, swelling power, brewed color, brewed aroma, brewed texture and brewed flavor. Pre-gelatinization temperature factor significantly ($p \leq 0.05$) affected water absorption index, swelling power, pre-brewed flavor, pre-brewed aroma, pre-brewed texture, brewed color, brewed aroma, and brewed flavor but not significantly affected amylose content and pre-brewed flavor. Interaction of proportion factor between white corn flour and rice flour with pre-gelatinized factor significantly ($p \leq 0.05$) affected pre-brewed color, pre-brewed aroma, pre-brewed texture, brewed color, brewed aroma, and brewed texture but not significantly affected amylose content, water absorption index, swelling power, pre-brewed flavor, and brewed flavor.

Keywords : Pre-gelatinization, White Corn, Instant Porridge