

INTISARI

Beras pratanak terfortifikasi merupakan salah satu bahan pangan sumber karbohidrat, beras pratanak memiliki keunggulan berindeks glisemik (IG) rendah, dan mengandung pati tahan cerna akan tetapi beras pratanak kurang disukai. Ekstrak kayu manis yang mengandung senyawa bioaktif dapat meningkatkan sifat fungsional beras pratanak, melalui penambahan ekstrak pada saat perendaman gabah. Suhu perendaman mengakibatkan perubahan preglatinisasi pati sehingga erat kaitannya terhadap mutu beras maupun kualitas nasi yang dihasilkan. Tujuan penelitian ini adalah mengetahui pengaruh suhu perendaman dan konsentrasi ekstrak kayu manis terhadap karakteristik *pasting*, aktivitas antioksidan, dan total fenol beras pratanak terfortifikasi.

Penelitian ini menggunakan rancangan acak lengkap (RAL) dengan perlakuan suhu perendaman (60, 65, dan 70 °C) dan konsentrasi ekstrak kayu manis: 5%, 10%, dan 15%. Analisa yang dilakukan adalah analisa karakteristik *pasting*, aktivitas antioksidan, dan total fenol. Data yang diperoleh dilakukan analisa varian (ANOVA) dengan tingkat kepercayaan 95%. Apabila beda nyata masing-masing perlakuan dilanjutkan dengan uji *Duncan Multiple Range Test* (DMRT).

Hasil penelitian menunjukkan bahwa suhu perendaman dan konsentrasi ekstrak kayu manis mempengaruhi terhadap karakteristik *pasting*, dan meningkatkan aktivitas antioksidan dan total fenol. Beras dengan suhu perendaman 70 °C dan konsentrasi 5% memiliki nilai viskositas terendah (562cP) aktivitas antioksidan 19,92 (%RSA) dan total fenol sebesar 1750 (mg GAE/g bk)

Kata kunci : Beras pratanak, suhu perendaman, ekstrak kayu manis

EFFECT OF SOAKING TEMPERATURE AND CONCENTRATION OF CINNAMON EXTRACT ON PASTING CHARACTERISTICS, ANTIOXIDANT ACTIVITY, AND TOTAL PHENOL OF CROMIUM AND MAGNESIUM FORTIFIED PARBOILED RICE

ABSTRACT

Parboiled rice has the advantage of low glycemic indexed (IG), and contains resistant starch, but parboiled rice is less preferred. A cinnamon extract containing bioactive compounds can improve the functional properties of parboiled rice, through the addition of extracts during grain soaking. The temperature of soaking affects starch gelatinization. It is closely related to the quality of rice and the quality of rice produced. The purpose of this study was to determine the effect of soaking temperature and the concentration of cinnamon extract on pasting characteristics, antioxidant activity, and total phenol of fortified parboiled rice.

This study uses a completely randomized design (CRD) with soaking temperature treatment (60, 65, and 70 °C) and the concentration of cinnamon extract: 5%, 10%, and 15%. The analysis carried out was an analysis of pasting characteristics, antioxidant activity, and total phenol. Data obtained was analyzed by variance (ANOVA) with a confidence level of 95% and if the significant difference of each treatment is continued with Duncan's Multiple Range Test (DMRT) test.

The results showed that the soaking temperature and the concentration of cinnamon extract affected the pasting characteristics, and increased antioxidant activity and total phenol. Rice with soaking temperature of 70 °C and a concentration of 5% has the lowest viscosity (562 cP), antioxidant activity 19.92 (% RSA) and total phenol of 1750 (mg GAE / 100 g bk)

Keywords: Parboiled rice, soaking temperature, cinnamon extract, pasting, antioxidant activity