

# **PENGARUH CARA PENAMBAHAN EKSTRAK PANDAN DAN LAMA PENDINGINAN TERHADAP SIFAT FISIK, KIMIA DAN MUTU TANAK BERAS *PARBOILED* TERFORTIFIKASI KROMIUM DAN MAGNESIUM**

## **INTISARI**

Beras *parboiled* terfortifikasi kromium dan magnesium memiliki IG (indeks glikemik) rendah, tetapi kurang disukai karena mudah tengik dan beraroma sekam padi. Oleh karena itu, untuk memperbaiki sifat fisik dan kimia beras *parboiled* perlu dilakukan penambahan ekstrak pandan dan untuk menjamin IG rendah dilakukan pendinginan. Tujuan penelitian ini adalah mengetahui pengaruh cara penambahan ekstrak pandan dan lama pendinginan terhadap sifat fisik, kimia dan mutu tanak beras *parboiled* terfortifikasi kromium dan magnesium.

Penelitian ini menggunakan rancangan acak lengkap dengan perlakuan cara penambahan ekstrak pandan (EP) dan fortifikasi Cr dan Mg : 1 (Cr + Mg + EP - 65°C - 2,5 jam), 2 (Cr + Mg - 65°C - 2,5 jam & EP - 100°C - 20 menit), 3 (Cr + Mg + EP - 65°C - 2,5 jam dan EP - 100°C - 20 menit), 4 (Cr + Mg + EP - 100°C - 20 menit) dan lama pendinginan (2°C) : 0, 12, 24, dan 36 jam. Analisa yang dilakukan adalah analisa fisik, kimia dan mutu tanak. 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 cara penambahan ekstrak pandan dan lama pendinginan dapat meningkatkan nilai tekstur, *color value*, *lightness*, kadar amilosa, gula reduksi dan *cooking time*, tetapi dapat menurunkan, kadar air, gula total, *water uptake ratio* dan *elongation*, dan tidak mempengaruhi ukuran dan bentuk, *bulk density*, *alkali spreading value*, kadar pati, total fenol dan *solid loss* beras *parboiled* terfortifikasi kromium dan magnesium.

Kata kunci : beras *parboiled*, ekstrak pandan, pendinginan

# **EFFECT OF PANDAN EXTRACT ADDITION METHOD AND COOLING TIME ON PHYSICAL, CHEMICAL PROPERTIES AND COOKING QUALITY OF PARBOILED RICE FORTIFIED WITH CHROMIUM AND MAGNESIUM**

## **ABSTRACT**

Parboiled rice fortified with chromium and magnesium have a low glycemic index but is less preferred because it is easily rancid and aromatic rice husk. Therefore, to improve the physical and chemical properties of parboiled rice it is necessary by pandan extract addition and to ensure low fixed IG by cooling. The purpose of this research is to know the effect of pandan extract addition and cooling time on physical, chemical properties and cooking quality of parboiled rice fortified with chromium and magnesium.

This research used completely randomized design with the treatment of pandan extract (PE) addition and fortified with Cr and Mg : 1 (Cr + Mg + PE - 65 °C - 2.5 hours), 2 (Cr + Mg - 65 - 2.5 hours & PE - 100 °C - 20 minutes), 3 (Cr + Mg + PE - 65°C - 2.5 hours and PE - 100°C - 20 minutes), 4 (Cr + Mg + PE - 100°C - 20 minutes) and cooling time (2°C) used is 0, 12, 24, and 36 hours. The analyzes were physical, chemical properties and cooking quality. The data were analyzed by analysis of variant (ANOVA) with 95% confidence level. If the real difference of each treatment continued by Duncan Multiple Range Test (DMRT).

The results show that the pandan extract addition and cooling time could increase of the texture, color value, lightness, amylose content, reducing sugar, and cooking time, but could decrease its water content, total sugar content, water uptake ratio, and elongation, and does not affect size and shape, bulk density, alkali spreading value, starch content, total phenol and solid loss of parboiled rice fortified with chromium and magnesium.

Keywords: parboiled rice, pandan extract, cooling time