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Functional components and radical scavenging activity of brown rice according to addition rate and cooker

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Abstract

This study was carried out to compare the antioxidant components and antioxidant activity of brown rice according to addition rate (0, 10, 20, 30, 50, and 100%) and cooker. Brown rice was cooked using general and high pressure cookers with and without fermented alcohol. Pasting characteristics with addition rate of brown rice decreased with increasing amounts of brown rice. Total polyphenol and flavonoid contents increased with increasing amounts of brown rice. DPPH and ABTS radical scavenging activities increased with increasing amounts of brown rice. Moreover, brown rice cooked by the general cooking method with fermented alcohol showed higher antioxidant effects compared to other cooking methods. In this study, antioxidant components and antioxidant activity of cooking brown rice with addition rate and cooking method can be used as basic data on processed manufactured products.

Keywords: brown rice, water binding capacity, polyphenol, radical scavenging activity

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