



INFLUENCE OF PU-ERH TEA EXTRACT ON PHYSICOCHEMICAL AND FUNCTIONAL PROPERTIES OF GERMINATED BROWN RICE

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ABSTRACT

Brown rice is prepared by removing the hull of the rice kernel. Despite the high nutritional value of normal brown rice, it is not widely accepted as it cannot be cooked easily in a conventional rice cooker. However, germinated brown rice (GBR) is easy to cook and the texture is also softer than that of the normal brown rice. The objective of this study was to investigate the physicochemical and antioxidant potential of GBR produced by soaking in different concentrations (0.5–3%, w/v) of Pu-erh tea extracts. The lightness value of the extract-treated GBR was reduced, however, the redness and yellowness values were significantly increased with the concentration of the tea extracts. The GBR samples grown with the extract treatment were enriched with some amino acids such as γ -aminobutyric acid although the amount of total free amino acid was reduced in the treated samples. Similarly, the amount of total minerals and DPPH free radical scavenging potential of the extract-treated samples were higher than that of the untreated one. The total polyphenol and/or flavonoid levels of some of the tea-treated GBR samples were also improved. The results indicated that the nutritional and functional properties of brown rice could be enhanced by Pu-erh tea extract treatments.
