

Title Comparison of chemical compositions and bioactive compounds of germinated rough rice and brown rice

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Citation Food Chemistry, Volume 122, Issue 3, 1 October 2010, Pages 782-788

Keywords Germinated brown rice; Germinated rough rice; Brown rice; Bioactive compounds; γ -Aminobutyric acid

Abstract

The aim of the study was to compare changes in the chemical compositions and bioactive compounds of germinated rough rice and germinated brown rice. Ungerminated rice (brown rice) and germinated rice extract powder were also prepared, for comparison purposes. In general, the concentration of crude protein, total free amino acids, α -tocopherol, γ -oryzanol, thiamine, niacin and pyridoxine, in the germinated rough rice and the germinated rice extracted powder, were significantly higher, than those of the germinated brown rice and the ungerminated rice, whilst there was no significant difference in the levels of crude fat, carbohydrate and ash. The amino acid contents of the germinated rice products were also investigated and differences were found amongst these samples. The most significant changes, in γ -aminobutyric acid, glycine, lysine and leucine, were observed in the germinated rough rice and the germinated rice extracted powder.