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## Effect of Fermentation on the Peptide Content, Phenolics and Antioxidant Activity of Defatted Wheat Germ

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### Abstract

This work investigated the changes of free phenolics and peptides and their synergistic interaction in total antioxidant properties of defatted wheat germ (DWG) by the fermentation of *Bacillus subtilis*. DWG hydrolysates were found to have a significantly higher ( $P < 0.05$ ) total phenolic content (26.09 mg Gallic acid equivalent (GAE)  $\text{g}^{-1}$  extract, dry weight) than non-fermented DWG (10.55 mg GAE  $\text{g}^{-1}$ ). Fermentation resulted in an increase in free phenolics (from 15% to 95% of total phenolic content), while a decrease in bound phenolics throughout the process. Fermentation changed the mode of polyphenol-protein interaction and promoted the release of free phenols. Meanwhile, there was an increase in peptide content (4.31%

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