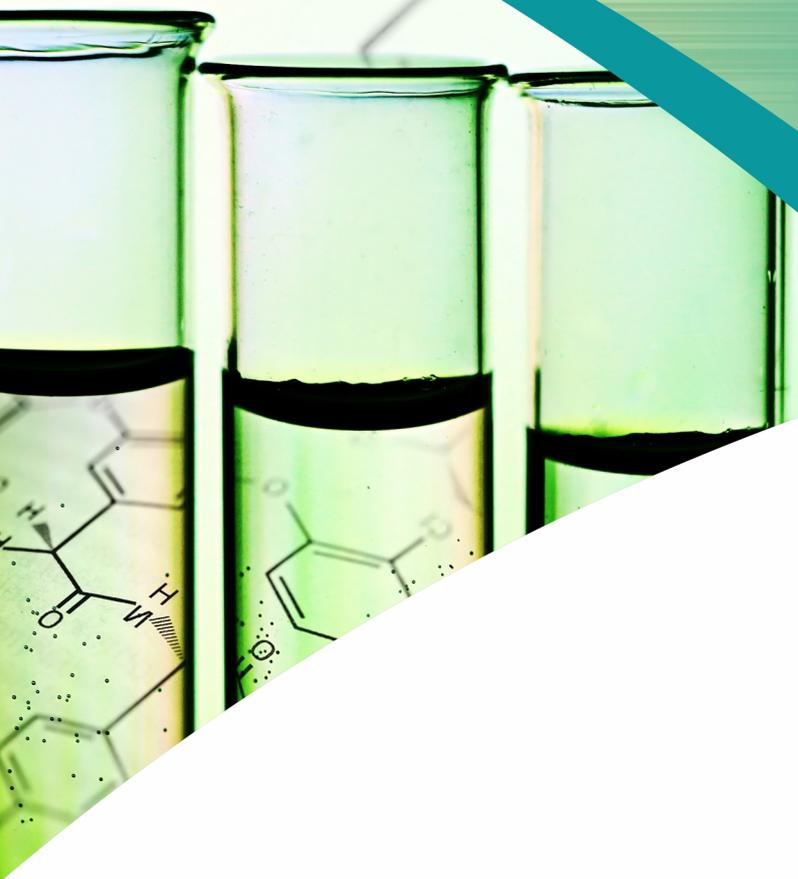


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Effect of Fermentation on Amino Acid Profiling of Shalimar Wheat by Different Probiotics

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ABSTRACT

Background and Aim: Different fermented products are consumed throughout the world; as nutritive value of food products are increased after fermentation. Wheat is a staple cereal consumed worldwide, but in different places particularly in the hilly areas of India. Fermented wheat is consumed for maintaining bone health that seems to suggest that different nutritive components are increased but there is no scientific data available for its use. The objective of this study was to increase the nutritive value of fermented Shalimar wheat by using probiotics.

Methods: Probiotics were used for the fermentation of Shalimar wheat and the effect of microbes on nutrition value were analyzed. After usual work up, the samples were used for proximate analysis, antioxidant activity by 2, 2-diphenyl-1-picrylhydrazyl (DPPH) and fluorescence recovery after photobleaching (FRAP) and amino acid profiling by using High-performance thin-layer chromatography (HPTLC).

Results: Based on the results it was found that fermentation of Shalimar wheat with *Lactobacillus casei* and *Lactobacillus rhamnosus* increased its nutritional value. Protein content was found to increase from 9% to 16% which in turn increased essential amino acids content. After fermentation some essential and non-essential amino acids are also biosynthesized. It was observed that antioxidant activity of Shalimar wheat was also increased by fermentation in comparison to the unfermented Shalimar wheat.

Conclusion: Fermentation of Shalimar wheat changed the amino acid profile of the product and resulted in enhanced antioxidant properties.



Aims & Scope

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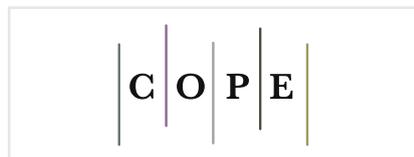
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