



QUALITY CHARACTERISTICS OF MUFFINS PREPARED FROM REPLACEMENT OF WHEAT WITH BARLEY: NUTRITIONAL, ANTI-OXIDATIVE AND MICROBIAL POTENTIAL

Sneh Punia¹✉, Sanju Bala Dhull¹, Anil Kumar Siroha¹

¹*Department of Food Science and Technology, Chaudhary Devi Lal University, Sirsa, India*

✉*dimplepooniam@gmail.com, snehpunia69@gmail.com*

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ABSTRACT

The objective of present study was to investigate the sensorial, nutritional and microbial value and acceptance of muffins prepared from barley flour as partial replacement of wheat flour. The barley flour was incorporated in the proportion of 100:0, 95:5, 90:10, 85:15, 80:20 and 75:25% of wheat flour for the formulation of muffins and found that muffins containing barley flour were nutritionally superior. The results revealed that with increase in incorporation of barley flour, a positive increase in protein, total phenolic compounds and scavenging activity toward ABTS⁺ and DPPH of muffins was observed. However, baking led to a reduction in phenolic and antioxidant properties. The muffins were also found microbiologically safe for human consumption. This study suggested that partial replacement of wheat flour with barley flours rich in nutritional and bioactive compounds, diversify the utilization of barley flour in various bakery products.