



## ENRICHMENT OF SANGAK BREAD WITH CARROT POMACE POWDER AND ITS EFFECT ON DOUGH RHEOLOGY, BREAD QUALITY, AND SHELF LIFE

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**ABSTRACT**

The study explores the use of antioxidant dietary fiber (ADF) from vegetable and fruit by-products in bread production to enhance nutritional value and reduce food waste. Specifically focusing on Sangak bread, a popular flatbread in Iran, the research investigates the effects of supplementing soluble fiber from carrot powder on bread quality and shelf life. By adding carrot pomace powder at different levels to the bread dough formulation, improvements in protein levels, reduced carbohydrate content, and enhanced dough strength were observed. The enriched bread samples showed less variation in texture over six days of storage, with the initial firmness attributed to the moisture absorption properties of carrot pomace powder. While the enriched dough exhibited changes in texture and sensory qualities compared to the control sample, the 3% enrichment level was found to be superior in terms of aroma and overall acceptability. The study emphasizes the importance of carefully balancing the incorporation of dietary fiber-rich ingredients in baked products to improve their nutritional profile without compromising sensory qualities. Overall, incorporating carrot pomace powder into Sangak bread at an optimal level of 3% is suggested as a promising approach to create a more nutritious and appealing product for consumers, addressing both health and sustainability concerns in the baking industry.

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