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Research Article

INFLUENCE OF CARROT POMACE FROM DIFFERENT VARIETIES ON COMMON AND DURUM WHEAT FLOUR MIXTURES PROPERTIES

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ABSTRACT

Common and durum wheat flour functionality and bioactive properties can be enhanced by incorporating carrot by-products. This paper aimed to evaluate the functional, color, and molecular properties as well as gluten content and quality, total polyphenols, and β-carotene of durum and common wheat flour as influenced by carrot pomace addition (3, 6, 9, and 12%) from different varieties. A decrease in gluten content, index deformation, and falling number was observed as the addition doses of carrot pomace increased. A proportional enhancement of total polyphenols and β-carotene content was obtained. Flour lightness decreased and the nuance of yellow and red rose as the addition dose was higher. FT-IR bands specific for β-carotene, fibers, and polyphenols were observed. The hydration, absorption, and retention capacities of common and durum wheat flours were enhanced depending on the addition dose. These results suggest that common and durum wheat–carrot pomace flour mixtures can be used in pasta production to obtain functional products with enhanced nutritional value.