THE USE OF GRAPE POMACE FOR DEVELOPING AN INNOVATIVE YOGHURT WITH ENHANCED ANTIOXIDANT PROPERTIES

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Abstract

The present paper explores the use of grape pomace, a by-product of the wine industry, as a functional ingredient for enriching yoghurt with the aim of increasing its nutritional value and antioxidant capacity. Through modern ultrasound-assisted extraction techniques, bioactive compounds were recovered from the grape pomace, resulting in a high content of polyphenols, flavonoids, and anthocyanins. The study evaluated the impact of adding grape pomace powder in 1% and 2% proportions on the chemical, phytochemical, and sensory properties of the yoghurt. The chemical results showed an increase in fibre, protein, and dry matter content, while the phytochemical analysis revealed a significant rise in total anthocyanins, flavonoids, and polyphenols, along with greater antioxidant activity in the enriched yoghurts compared to the control yoghurt. Additionally, the sensory analysis demonstrated high acceptability for the yoghurt with 3% grape pomace powder, achieving a total score of 19.6, classifying it as "very good," while the 6% variant received a lower score. These findings highlight the potential of using grape pomace to create innovative dairy products with improved nutritional and functional benefits, thus contributing to the sustainable valorisation of an agro-industrial by-product.

Key words: yoghurt, by-product, grape pomace, quality.