"THE EFFECT OF DRAGON FRUIT PEEL POWDER CONCENTRATION IN THE PROCESS OF MAKING SALTED EGGS ON SENSORY QUALITY AND ANTIOXIDANT ACTIVITY"

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ABSTRACT

Background: Eggs are highly nutritious animal food but have a short shelf life due to the easily damaged quality by microorganisms. Salting is one of the preservation methods that can modify eggs into salted eggs with a longer shelf life. The latest innovation in salted egg processing is carried out by adding natural ingredients such as red dragon fruit peel powder (Hylocereus polyrhizus), which is known to have high antioxidant content and has the potential to improve the sensory quality of food products. **Objective:** This study aims to determine the effect of dragon fruit peel powder concentration on sensory quality and antioxidant activity in salted eggs and determine its optimal concentration. **Methodology**: This study used an experimental method with variations in the concentration of dragon fruit peel powder, namely 0% (control), 5%, 10%, and 15%. Sensory quality parameters were tested using the organoleptic (hedonic) method by 30 untrained panelists, including color, aroma, taste, texture, and preference. Antioxidant activity was determined quantitatively by the DPPH method using a UV-Vis spectrophotometer at a wavelength of 517 nm. The IC50 value was calculated to assess the antioxidant strength. **Results:** The results showed that the addition of dragon fruit peel powder had a significant effect on color, aroma, and taste, but did not significantly affect the texture of egg white. The optimal concentration for sensory quality was obtained at a concentration of 5%, with a relatively high preference value. Antioxidant activity increased with increasing concentration of dragon fruit peel powder, with the best IC50 value of 1.8934 ppm at a concentration of 15% (very strong category). Conclusion: The addition of dragon fruit peel powder can increase antioxidant activity and affect the sensory quality of salted eggs, with different optimal concentrations for each parameter.

Keywords: Salted eggs, Dragon fruit skin, Organoleptic, Antioxidants, DPPH