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Sensory attributes and other properties of yogurt fortified with immobilized lactobacillus plantarum and soybean residue (okara)

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**Abstract:**

Yogurt enriched with probiotic bacteria benefits health by strengthening the abdominal ecosystem. A short shelf-life and poor survivability of probiotic in yogurt remains a great problem in production and manufacturing processes. Cell immobilization is believed as a suitable way to lengthen the probiotic survivability and prolong yogurt shelf-life. One of the cheap sources of natural immobilization carrier is okara, a soybean by-product. Due to its overproduction, the okara is becoming a source of pollution. The use of okara as a food additive in dairy products such as yogurt is potentially one strategic approach to minimize pollution. Therefore, this study has evaluated the effect of fortification with increasing concentrations of okara on texture, probiotic survivability, nutritive value, and sensory qualities of yogurt. On day 1, the yogurt fortified with 1% okara was the most preferable to panelists because of its high texture consistency, the lightest color, more sour taste, low sugar and fat contents, and high viability of probiotic bacteria. Based on this finding, we suggested 1% okara is the best formulation for symbiotic yogurt production.