

Effect of Culture Concentration and Sweet Potato Prebiotic to the Properties of Sweet Corn Juice Probiotic

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Abstract	<p>Sweet corn extract with the addition of lactic acid bacteria can improve its function as probiotic drinks. Sweet potato as a prebiotic is expected to increase the activity of lactic acid bacteria probiotic sweet corn extract. The use of culture in the making of sweet corn extract probiotics will affect the character of the product. The purpose of this study were: (1) to study the effect of culture concentration on characteristics of probiotic sweet corn extract; (2) to study the effect of red sweet potato extract on characteristics of probiotic sweet corn extract; and (3) to determine the best treatment combination between the culture and the concentration of red sweet potato extract in the production of probiotic sweet corn extract; and comparing commercial in the market. Research using a completely randomized design (CRD) with research factor is the concentration of the culture (2, 3, 4, and 5%) and red sweet potato extract (5, 10, 15, 20 and 25%). The results showed that the more the concentration of the culture is added, the number of lactic acid bacteria, total acid and viscosity increase; while pH, total dissolved solids, fat and protein concentration decreased. The more sweet potato extract is added, the total dissolved solids and viscosity increased; while the levels of protein and fat decreases. The best treatment combination was at a concentration of 4% culture and 15% sweet potato extract. The products have a pH of 3.88, a viscosity of 261.5 cP, lactic acid levels of 0.87%, 0.05% fat content, total dissolved solids 19.10 oBrix, and 3.23% of total protein. Yoghurt is compliant SNI standard yoghurt, except for protein content was lower at 3.23 (SNI according to at least 3.5).</p>
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