

The Formulation of Cheese Analogue from Sweet Corn Extract

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Abstract	<p>Analogue cheese made from sweet corn extract was expected to fulfill the people's need for cheese and as alternative cheese made from cow's milk. The use of maltodextrin as a filler and citric acid as an acidulant was expected to improve the characteristics of corn cheese. The aims of this article were to (1) determine the optimum concentration of maltodextrin, papain, and citric acid in order to produce corn milk-based cheese analogue with the best characteristics; (2) determine the characteristics of cheese analogue produced using the optimum concentration. The research design used in this study was Response Surface Methodology (RSM) based on Central Composite Design (CCD) with three factors: citric acid concentration (0.12%, 0.16%, and 0.20%), commercial papain (0.026%, 0.030%, and 0.034%), and maltodextrin (10%, 15%, and 20%). The optimum formula to produce cheese analogue with the highest protein content and yield was with the addition of 0.20% citric acid, 0.029% papain, and 20% maltodextrin. The cheese analogue produced from the optimum formula had moisture content of 61.590%, yield of 17.512%, total dissolved solids of 19.00 degrees Brix, dissolved protein of 19.837%, acidity (pH) of 5.4, and fat of 6.976%. The sensory characteristics of cheese analogue spread from sweet corn extract are similar to those of cheese from cow's milk; i.e., it had a yellowish-white color, distinctive aroma of cheese, no sour taste, and soft texture and was easy to spread. Therefore, it was possible to explore the sweet corn as ingredient of spread cheese that has low fat content.</p>
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