

OPTIMIZATION OF *Lactobacillus casei* VIABILITY IN SWEET PURPLE TABLET CANDY

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Probiotics are living microbes in food that beneficial for gastrointestinal health. Generally, probiotic food are milk based, such as fermented milk, yogurt, and cheese. For to now, probiotic food based on tubers commodity is rare. Alternate functional food that developed from tubers are sweet purple candy tablets fortified with probiotics.

This study uses the Central Composite Design Response Surface Methodology (CCD RSM), which consists of 2 variables: the concentration of sucrose (X1) and maltodextrin (X2). Response that optimized is the total of Lactic Acid Bacteria/LAB (CFU/g). At variable concentrations of sucrose (X1), minimum (-1) at 3%, the optimum (0) by 5%, and maximum (+1) 7%, while for variable maltodextrin (X2) the minimum threshold (-1) at 5%, the optimum (0) by 7%, and maximum (+1) 9%. This study uses Design-Expert software DX 7.1.5 for statistical data processing.

Optimum process results further verified by the results of calculations based on the existing model equations. Results of total of LAB at the optimum point of $1,7 \times 10^8$ CFU/g, water content of 5,1%, disintegration time of 17.41 minutes, violence of 8.85 kg/cm^2 , brightness value (L) of 54.2, redness (a^*) of 25.8, yellowness (b^*) of 8.9, uniformity of weight of 0.23 grams, a diameter of 0.61 cm, and thickness of 0.28 cm.