

***Quality Control Analysis of Edamame Brownies Chips
Using Statistical Process Control (SPC) Method at CV Raddina Chocolate
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ABSTRACT

This study aims to evaluate the effectiveness of quality control in producing Edamame Brownies Chips at CV Raddina Chocolate using the Statistical Process Control (SPC) method. This research is motivated by high daily product defect rates exceeding the company's tolerance limits. These deviations include fragile texture, excessively dark color, and imprecise shapes. A preventive approach is necessary to reduce raw material waste while maintaining customer satisfaction. Data collection utilized a check sheet, whereas data analysis applied the Pareto diagram, p-chart, and Ishikawa diagram. The results indicate that shape defects are the most dominant damage at 50.78%, followed by texture defects at 40.02%, and color defects at 9.20%. Evaluation of the p-chart proves the overall production process is statistically in-control. Furthermore, the process capability test shows excellent capability. Nevertheless, the Ishikawa diagram traces root causes across human, method, material, machine, and environmental dimensions. For continuous quality improvement, this study formulates strategic recommendations. These include implementing Standard Operating Procedures (SOP) for strict supervision during the final five minutes of baking, checking dough thickness, and optimizing the mixing process. The company is advised to condition dough in a chiller for 15 to 30 minutes before molding in order to maintain the fat stability.

Key Words: *Quality Controlling, Brownies Chips Edamame, SPC*