

***Quality Control of Banana Chips With  
Statistical Process Control Study Methods  
The case at UD. Manalagi Jombang***

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***ABSTRACT***

*UD. Manalagi Jombang was a micro-enterprise engaged in the production of banana chips. However, its production activities operated without a documented quality control system and relied solely on the owner's instructions and the workers' experience. This condition led to a high potential for product defects such as broken, burnt, and unclean chips, which negatively affected the product's quality and competitiveness. This study aimed to analyze the quality control of banana chips at UD. Manalagi Jombang using the Statistical Process Control (SPC) method and to identify the factors that influenced product quality. The research employed a descriptive quantitative approach through direct observation and recording of defective product data over 20 observation periods. Analysis tools included check sheets, np control charts, Pareto diagrams, cause-and-effect diagrams, and process capability analysis. The results showed that the most dominant defect was broken chips, accounting for 46% of total defects, primarily caused by human factors, particularly rough handling and lack of training. The process capability (Cp) value for broken chips was 0.956, indicating that the process did not fully meet quality standards. The implementation of SPC proved effective in monitoring process stability, identifying key causes of defects, and providing data-driven improvement directions. This study highlighted the urgency of applying a statistically-based quality control system in food MSMEs and addressed a research gap at UD. Manalagi Jombang, which had not previously implemented SPC.*

**Keywords:** *Chips, Quality, SPC.*