

***Quality Control of Tofu Products Using the Six Sigma Method at UD Barokah
Tofu Factory in Situbondo Regency***

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ABSTACT

This research seeks to analyze and enhance the quality of tofu products at UD Barokah tofu factory in Situbondo Regency through the application of the Six Sigma method. Six Sigma represents used as a systematic approach to identifying, measuring, analyzing, and reducing production defects to enhance efficiency and customer satisfaction. This research applies the DMAIC (Define, Measure, Analyze, Improve, Control) methodology to determine the factors responsible for defects in tofu products. Data were gathered via direct observation and interviews with the business owner, and recording the number of defective products over a certain period. The results indicate that the dominant defects in tofu production at UD Barokah include inconsistent color, sour odor and taste, and uneven tofu sizes. Sigma level calculations show that production quality is still below the optimal industry standard, using a DPMO (Defects Per Million Opportunities) A total of 269,000 units in value per process. This signifies that out of out of one million units produced, approximately 269,000 may be defective, leading to a sigma level of 2.11. Based on a root cause analysis utilizing a fishbone diagram, several factors contribute to product defects, including human factors, machinery, raw materials, methods, and environmental conditions. The implementation of the Six Sigma method can serve as an effective strategy for quality control in small to medium-scale tofu factories.

Keyword : Six Sigma, Quality Control, Tofu, DMAIC, UD Barokah