Quality Control of Purple Sweet Potato Chips Production with Statistical Process Control Method in UMKM Ganesa Mojokerto

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ABSTRACT

Purple sweet potato chips are one of the flagship products manufactured by UMKM Ganesa, whose quality must be maintained to uphold customer trust and loyalty. Along with dynamic market developments, the increasing intensity of competition in the business sector encourages UMKM players to always make improvements and improve product quality. This study aims to evaluate the quality control system that has been implemented in UMKM Ganesa, identify factors that affect the defects of purple sweet potato chips products in the production process at UMKM Ganesa, review the application of Statistical Process Control (SPC), and provide relevant recommendations in an effort to improve product quality. The Statistical Process Control method was used in this study by utilising several analytical tools, namely check sheets, control charts, pareto diagrams, and ishikawa diagrams. The results identified that on the control map of the colour uniformity attribute there were 3 points that were outside the control limits. On the shape integrity attribute, there are 8 points that are outside the control limits, while on the product crispness attribute, there are 2 points outside the control limits. However, the process capability value of each attribute shows good results that can meet the standards of Ganesa MSMEs, namely 90.14% for colour uniformity, 91.17% for shape integrity, and 98.88% for product crispness. Based on the Ishikawa diagram analysis, the main cause of quality deviations was identified to be the human factor.

Key Words : Purple Sweet Potato Chips, Quality, Statistical Process Control