

***Analysis of White Tofu Quality Control Using a
Statistical Process Control Approach at UD Al-Jalil
in Jember Regency***

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ABSTRACT

UD Al-Jalil was established in 2013 and produces white tofu in large quantities. This study aims to examine the quality control of white tofu and the factors causing defects in the tofu at UD Al-Jalil. Statistical Process Control (SPC) was used in this study as an analytical tool, utilizing an np control chart, a Pareto chart, process capability analysis, and a cause-and-effect diagram. Observations were conducted 20 times with a 10% daily sample size, totaling 390 white tofu units. The results of the np control chart revealed that some points still exceeded the control limits, particularly for the integrity and shape uniformity variables of the white tofu, indicating that the process is not yet fully under control. Meanwhile, the tofu cleanliness variable was within control limits. The Pareto chart showed the highest defect rate in the tofu integrity variable at 54.09%, making it the most dominant defect in the white tofu production process at UD Al-Jalil, followed by the tofu shape uniformity variable at 26.05% and the tofu cleanliness variable at 20%. The process capability of the three variables indicates that the company's process performance is suboptimal. The results of the cause-and-effect diagram for the variable of white tofu integrity indicate that this is caused by the use of simple pressing equipment, the lack of written standard operating procedures (SOPs), and employees' lack of attention to detail. The variable of tofu shape uniformity is caused by dull, slightly rusty knives, as well as employees working hastily and lacking focus. The variable of white tofu cleanliness is caused by an insufficiently clean soybean washing process, an unsuitable environmental layout since the production process is located near a wood-burning stove, allowing for contamination by ash dust or dirt and employees who are not meticulous enough.

Keywords: *Quality Control, Tofu Quality, White Tofu, Statistical Process Control*